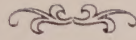


# The North Central Association Quarterly



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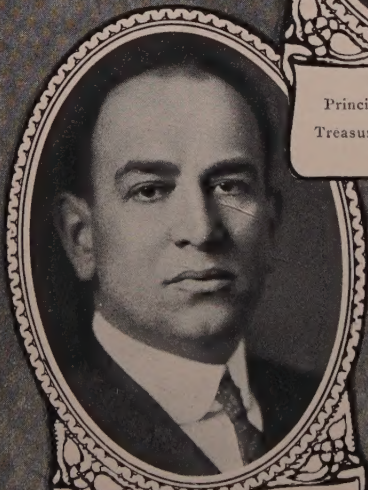
CHARLES C. BROWN  
High School Visitor,  
University of Colorado  
Secretary, North Central Association  
Commission on Secondary Schools



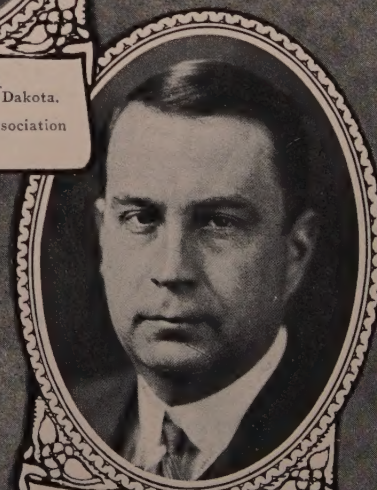
THOMAS M. DEAM, A. M.  
Asst. Supt., Joliet, Illinois, High  
School and Junior College  
Secretary, North Central Association  
Commission on Unit Courses and  
Curricula



W. I. EARLY, A. M.  
Principal, Sioux Falls, South Dakota,  
High School  
Treasurer of North Central Association  
Since 1922



JAMES B. EDMONSON, Ph. D.  
Professor of Secondary Education and  
Inspector of High Schools,  
University of Michigan  
General Secretary of North Central  
Association



GEORGE F. ZOOK, Ph. D.  
President, University of Akron,  
Akron, Ohio  
Secretary, North Central Association  
Commission on Higher Education



# THE North Central Association QUARTERLY

Vol. II

SEPTEMBER, 1927

No. 2

## News Notes and Editorial Comments

### OUR GALLERY

This month we are presenting the likenesses of the four secretaries and the treasurer of the Association. Mr. Edmonson is the general secretary of the entire organization; Mr. Early is the general treasurer. Messrs. Brown, Deam, and Zook are, respectively, the secretaries of the Commission on Secondary Schools, the Commission on Unit Courses and Curricula, and the Commission on Institutions of Higher Education. Each of these men is, by virtue of his elected office, a member of the North Central Association Quarterly Editorial Board.

Mr. W. I. Early, A. M., is a Hoosier by birth. He took his A. B. degree from Indiana University and his A. M. degree from the University of Wisconsin. For twenty-eight years he has served as a high school principal, the last nineteen of these being in Sioux Falls, South Dakota.

Mr. Early has held a number of positions in connection with educational work in South Dakota, having served the state educational association in the capacity of treasurer, executive committee-man and president. He also lectures frequently throughout the state.

Mr. Early's connection with the North

Central Association dates back eighteen years, he not having missed an annual meeting during all that time. He has served on many committees and since 1922 has been the Association's most efficient treasurer.

Mr. Charles C. Brown is a Wolverine by birth, having been born and raised near Harbor Springs, Michigan. He moved to Colorado in 1904, and has spent the rest of his life in that commonwealth. He has been engaged in public school work in all capacities from a rural school position to a city superintendency. From 1918-1919 he served as welfare worker with the A. E. F. in Europe. In 1920, he went to the University of Colorado as high school visitor, and now devotes virtually all of his time to the inspection of schools. Mr. Brown was made secretary of the Commission on Secondary Schools in March, 1927.

Mr. Thomas M. Deam, A. M., has been secretary of the North Central Association Commission on Unit Courses and Curricula since 1921. He has also held other important positions on various committees in the Association.

Mr. Deam pursued his undergraduate collegiate work in the University of Indiana, taking his A. B. degree from that institution in 1908. His A. M. degree he



received from Columbia University in 1915. He is at present enrolled (part time work) in the University of Chicago, seeking to secure a Ph. D. degree.

Mr. Deam was for nine years principal of the Decatur, Illinois, high school. He is now assistant superintendent of the Joliet Township High School and Junior College, Joliet, Illinois. He has also conducted courses in education in the summer sessions of the University of Michigan, Northwestern University, and the University of Chicago.

Mr. George F. Zook, Ph. D., was born at Fort Scott, Kansas, April 22, 1885. He took his A. B. and A. M. degrees from the University of Kansas, and his Ph. D. degree from Cornell University. His teaching experience has been in connection with the University of Kansas, Cornell University, and Penn State College, he having served in the latter institution successively as assistant professor, associate professor and professor from 1909 to 1920. His major fields of interest have been history, political science, and economics.

In 1920, Dr. Zook accepted the position of chief of the Division of Higher Education of the United States Bureau of Education and assistant to the Commissioner of Education. In these capacities, Dr. Zook carried on a number of research studies, including a study of the residence and migration of college and university students classified according to sex and courses of study. He also directed a number of school surveys in various states and cities of the Union. Dr. Zook is also the author of a book dealing with the history of the slave trade, and has played an important part in the organization of junior colleges throughout the United States.

In 1925, Dr. Zook became president

of the University of Akron and is deeply interested in the broader field of higher education generally. In 1926, he conducted courses in Ohio State University and in 1927 he had charge of a similar course both there and in Columbia University.

Dr. Zook was elected secretary of the Commission on Institutions of Higher Education in the North Central Association in 1926 and continues to hold that office.

Mr. James B. Edmonson, Ph. D., was born at Parkersburg, Iowa, in 1882. He took his A. B. and A. M. degrees from the University of Michigan, and his Ph. D. degree from the University of Chicago. For seven years, 1907-1914, he was principal of high schools in Michigan and then became professor of secondary education and inspector of high schools for the University of Michigan.

Dr. Edmonson has been actively connected with numerous educational agencies and institutions all his life. He has served on many commissions, boards, and committees in Michigan; has been president and secretary of the National High School Inspectors' Association; was the first chairman of the National Committee on Research in Secondary Education; has taught in summer sessions in the University of Chicago, University of Michigan, and University of Pennsylvania; is the author of several books and bulletins; and is a regular contributor to several educational magazines.

Dr. Edmonson's connection with the North Central Association dates from 1915. During the past twelve years he has been a forceful leader in the Commission on Secondary Education, and a wise counsellor in the Association generally. He is now serving his third year as general secretary of the Association.



## INTERESTING FACTS FROM THE EXECUTIVE COMMITTEE

Much of the work of the Executive Committee is routine work. It has, therefore, little interest for the typical reader. A few matters are, however, of such general import that they may be mentioned in the Quarterly. Among the questions acted upon recently are the following:

1. It was voted to place the expenditures of the Association on a strict budgetary basis.
2. It was voted to create a budget committee for the year, said committee to consist of the secretary, treasurer, and president.
3. It was voted to send \$100 as membership to the National Council on Education.
4. It was voted to pay \$150 to help carry on the work of the National Committee on Research in Secondary Education.
5. It was voted to defray the expenses of the representative of the Association to the meeting of the National Committee on Research during the ensuing year.
6. It was voted to send as fraternal delegates
  - a. To the Southern Association, Mr. Hughes.
  - b. To the New England Association, Mr. Zook.
  - c. To the Association of Middle States and Maryland, Mr. Edmonson.
  - d. To the Northwest Association, Mr. Gage.
7. It was voted to enter into correspondence with the officers of the Southern Association and of the Association of Middle States and Maryland, with a

view to arranging a joint meeting of the officers of these Associations and those of the North Central Association at some convenient time and place.

## JUNIOR HIGH SCHOOL ARTICULATION

Perhaps no subject has recently excited so much prolonged interest in North Central Association circles as has the junior high school. As early at least as 1917 the Association began to discuss the new unit and to define policies in respect to it. During the past ten years nearly every issue of the *Proceedings* has had something to say about its problems. The meeting of the Association in March last brought the junior high school again prominently before all Commissions and even onto the floor of the Association itself. This year the discussions related directly to the question of articulation. Three formal papers or reports were delivered on the subject and many other informal addresses made reference to it. The three formal papers appear in this issue of the Quarterly. These were prepared respectively by Professor Landsittel, Professor Reed, and Superintendent Gosling.

There will be, of course, many who will not agree that it is wise to base college admission entirely upon the work done in the tenth, eleventh, and twelfth grades of the senior high school. Strictly speaking the new proposals do not do so. Indirectly, if not directly, the senior high school comprehends the work of the grades much lower than the tenth. The junior high school is, though, confessedly an exploratory school, designed to meet the peculiar needs of early adolescents. If it is to serve that purpose it



must not be hampered in its efforts by always being compelled to think in terms of college preparation. Obviously, however, much of its work will be as fundamental to college admissions as ever was the case previously. Indeed in some respects it will be more so. No good junior high school will fail to give instruction in English, in history and civics, in mathematics, and in science. In fact, many, if not most, junior high schools will provide three years' each of such work. Further, foreign language study is also likely to be found in the eighth

grade, and surely will be found in the ninth grade. Hence pupils can, if they wish, secure four, five or even six years of secondary training in recognized college-preparatory work, whereas in the old type organization four years' work was generally the maximum for everyone.

If then it be asked what advantage the new arrangement has over the old the reply is—well, just read any good book dealing with the junior high school and read also the three papers presented in this issue.

### FINANCIAL STATEMENT OF W. I. EARLY, TREASURER, FOR THE YEAR 1926-1927

#### Receipts

##### From Higher Institutions:

(23 ten dollar memberships) (1926 fees) -----	\$ 230.00
(20 College Inspections) -----	500.00
(246 twenty-five dollar memberships) (1927) -----	6,150.00
(7 five hundred dollar fees) (Surveys) -----	3,500.00

---

\$10,380.00

##### From Secondary Schools:

(212 two dollar memberships) (1926 fees) -----	424.00
(1932 five dollar memberships) (1927 fees) -----	9,660.00

---

\$10,084.00

From Sale of Proceedings (Journal Office) ----- 699.97

Carried forward from 1926 Checking Account ----- 3,129.79

Sale of Bonds, Plus Interest from March 8 to April 15 ----- 3,124.35

---

\$ 6,254.14

TOTAL ----- \$27,418.11

#### Disbursements

Commission on Unit Courses and Curricula ----- \$ 1,342.99

Commission on Secondary Schools ----- 877.70



Commission on Higher Institutions-----	4,194.09
Printing:	
Journal -----	\$4,745.75
Miscellaneous -----	1,312.11
Total -----	6,057.86
Executive Committee -----	709.11
Refund of fees -----	55.00
Clerical and Miscellaneous Expense of Journal and General Secretary's Office -----	1,736.35
Telephone, Telegraph, Express, and Freight -----	145.90
Clerical Assistance to Treasurer -----	305.00
Postage -----	132.08
Surety and Depository Bonds -----	42.50
1925 Study Committee -----	175.30
Fraternal Delegate to Southern Association -----	129.20
Talent for 1926 Meeting -----	104.58
American Council of Education -----	100.00
Reporting 1926 Meeting -----	113.92
Notary Fees -----	15.00
Exchange on Checks -----	1.80
TOTAL -----	\$16,238.38

#### Cash on Hand

Bank Balance -----	4,730.33
U. S. Liberty Bonds 4 $\frac{1}{4}$ —4's -----	6,449.40
	\$11,179.73
TOTAL -----	\$27,418.11

#### REPORT OF AUDITING COMMITTEE

To the President and members of the North Central Association:

Your committee has audited the accounts of the Treasurer of the Association. They checked all debits and credit entries and verified the bank balance and cash on hand as against the balance sheet of the Treasurer.

Your committee found all to be correct and the accounting and bookkeeping

practice to be efficient and accurate. It feels your Treasurer should be commended upon this accuracy and efficiency and especially thanked for the thoughtful manner in which ledgers, vouchers and other data were arranged to facilitate the work of the auditing committee.

Signed, C. R. Maxwell,  
Signed, J. E. Armstrong,  
Signed, D. W. Rockey.

Dated at Chicago, Illinois, March 18, 1927.



### BUDGET ALLOWANCES FOR 1927-1928

Commission on Unit Courses and Curricula -----	\$ 2,000.00
Commission on Secondary Schools -----	1,200.00
Commission on Higher Insti- tutions -----	4,700.00
Journal printing -----	5,000.00
Executive Committee -----	750.00
Clerical and Miscellaneous Expense of Journal and General Secretary's Office-----	2,000.00
Telephone, Telegraph, Ex- press, and Freight -----	150.00
Clerical Assistance to Treas- urer -----	300.00
Postage -----	150.00
Surety and Depository Bonds	42.50
1925 Study Committee -----	500.00
Fraternal Delegate to South- ern Association -----	150.00
American Council of Educa- tion -----	100.00
Reporting 1926 meeting ----	125.00
Notary Fees -----	15.00
Committee on Junior High Schools -----	150.00
Total -----	\$17,332.50

### THE COMMISSION ON SECONDARY SCHOOLS OF MIDDLE STATES AND MARYLAND

Prepared by E. D. GRIZZELL, Chairman.

The Commission on Secondary Schools of the Association of Colleges and Secondary Schools of the Middle States and Maryland met on April 2nd at the Hotel Pennsylvania, Philadelphia. The membership of the Commission consists of Dean Herbert E. Hawkes, Columbia University; Dr. George William McClelland, Vice-Provost, University of

Pennsylvania; Professor Radcliffe Heermance, Director of Admissions, Princeton University; Dr. L. L. Jackson, Assistant Commissioner of Secondary Education, New Jersey State Department of Education; Miss Miriam A. Bytel, Head Mistress of St. Mary's School, New York City; Dr. John H. Denbigh, Principal, Packer Collegiate Institute, Brooklyn; Mr. Thurston Davies, Head Master, Nichols School, Rochester, N. Y.; Dr. Richard M. Gumere, Head Master, William Penn Charter School, Philadelphia, Dr. William A. Wetzel, Principal, Senior High School, Trenton; Dr. David E. Weglein, Superintendent of Schools, Baltimore; and Dr. E. D. Grizzell, University of Pennsylvania, Chairman.

The entire Commission was present at the meeting and a definite statement of policy and general administrative procedure was formulated and adopted. The Commission adopted a state committee plan similar to that used by other Accrediting Associations. Each state committee will consist of a resident member of the Commission, a public high school principal, a private secondary school headmaster, a registrar or director of admissions of a higher institution, a Professor of Secondary Education, a member of the State Department in charge of Secondary Education, and the Chairman of the Commission, ex-officio. New Jersey, Delaware, Maryland, and the District of Columbia will each have a state committee as indicated; New York and Pennsylvania will each have two state committees, the State Department official and the Chairman of the Commission serving on both committees. This modification of the state committee plan for these two states seems desirable because of the large number of schools in each and their wide geographical distribution.



Because of the great increase in college and university enrollment within the past few years, there is imperative need for an accredited list that will aid the secondary schools in establishing contacts with higher institutions. The demand for a reliable list of accredited schools is coming from higher institutions with greater force each year. There is need also for an active agency to study the problems confronting the secondary schools of the Middle States territory. The Commission hopes to function in the three-fold capacity of an agency for (1) articulating secondary and high schools, (2) establishing and maintaining an accredited list, and (3) promoting research for the solution of problems in secondary education in the

region represented by the Association.

A central office has been established for the Commission and placed in direct charge of the Chairman. Much preliminary work has been done. A complete directory consisting of 3,393 public and private secondary schools has been compiled. This large number of schools reveals the extent of the problems of accrediting in this territory. The Commission plans to proceed at once through the central office in establishing contacts with the schools. Information concerning any phase of the work may be secured by communicating with the Chairman of the Commission on Secondary Schools, 109 Bennett Hall, University of Pennsylvania, Philadelphia.

#### The Editor

*On June 17th the editor of the Quarterly sailed for Europe to be gone three months. However, he took time by the forelock and prepared the copy for the issue before he sailed. He also read the proof. If, therefore, any serious criticism is to be made upon the Quarterly this time, the shafts of complaint should be directed to Uncle Sam or some other impersonal fellow.*



# The Success of Freshmen in College

BY E. L. MILLER, DETROIT, MICHIGAN

In March, 1924, the Secondary Commission of the North Central Association authorized the Committee on Special Studies to investigate the success as freshmen of those students who were graduated in June, 1924, from North Central Association high schools and who entered college in September, 1924. This study was made by C. R. Maxwell. It covered 37,677 names, 1,573 secondary schools, and 785 colleges. Dean Maxwell made his report to the Association in March, 1926, at which time he was asked to do a little follow-up work.

Accordingly, at his request, I sent out a questionnaire, in the fall of 1926, (a) to all of the North Central Association high schools that in 1924 had 1000 or more pupils and (b) to a few of the small high schools, the latter being selected for special reasons. The distribution of these questionnaires and the receipt of answers are shown in the following table:

	Sent	Replies
Arizona .....	1	1
Arkansas .....	3	3
Colorado .....	7	2
Illinois .....	40	26
Indiana .....	16	8
Iowa .....	10	5
Kansas .....	6	4
Michigan .....	27	20
Minnesota .....	9	6
Missouri .....	15	8
Montana .....	5	1
Nebraska .....	6	4
New Mexico .....	3	2
North Dakota .....	3	2

Ohio .....	34	20
Oklahoma .....	5	2
South Dakota .....	4	3
Wisconsin .....	20	11
Wyoming .....	3	1
	<hr/>	<hr/>
	217	129

The questionnaire thus sent out was brief and simple. The first item was:

"Check on the following list the possible causes which you believe to have contributed appreciably to the failures among your graduates as freshmen in college."

The first and second possible causes suggested under A were faulty school equipment and inadequate school libraries. Seven replies indicated poor equipment as a possible cause, while nine mentioned inadequate libraries. From this question come two others: (a) How many books should a high school have (b) Should the physics department, which is used by five per cent of the pupils, have more space than the library, which is used by 100 per cent?

The third cause suggested was the faulty preparation of teachers. Seven replies indicated dissatisfaction with the preparation of high school teachers, one with that of junior high school teachers, and 32 with that of freshmen college teachers. Among the specific sins of college teachers there were mentioned lack of training in pedagogy, hap-hazard methods of correcting papers, and the practice of having lectures given by one teacher and quizzes by another.

The recommendation of all high school



graduates for college was mentioned as a fourth possible cause of failure. Of 135 replies, 54 indicated that this is an important factor. The replies also showed that some colleges admit graduates not recommended. Others are compelled by law to do so.

The fifth cause suggested was circumstances which in the community hamper high school work. The replies appear below in the order of their frequency:

6. Students compelled to work.
6. Language.
6. Movies, dances, autos.
5. Industrial spirit.
2. Poverty.
2. Too much money.
1. Changing population.
1. Lack of study halls.
1. Athletes run school.
1. Indifferent teachers.
1. Lack of correlation between subjects.
1. Overcrowded building.
1. Compulsory school attendance up to 18 years.

"Removal in college of that personal sympathy and co-operation between teachers, parents, and pupils which is maintained in high school" was the sixth suggested cause of failure. On this proposition 80 voted *Yes* and 43 *No*. Among the comments were:

(a) College teachers do not teach students but subjects.

(b) The college is responsible for freshman failures just as the high school is for those in Grade 9.

(c) This cause is rapidly disappearing.

(d) The greatest cause is sorority and fraternity rushing.

(e) The heart of the trouble.

The other causes suggested are as follows:

9. Lack of purpose.
8. Social activity.
8. Poor college teachers.
6. Fraternities.
6. Lack of brains.
5. Too much freedom.
4. Lack of character.
3. Most failures among those not recommended.
3. Supervised study in high school and not in college.
2. Colleges overcrowded.
2. Public contempt for scholarship and for those teachers who try to get it.
2. Go because it's fashionable.
2. Too much money.
1. Girls go to ensnare a husband.
1. Athletics.
1. College standards are and should be higher.
1. College work not practical.
1. Parents.
1. Lack of entrance examinations.
1. Compulsory education.
1. Scramble for extra-curricular honors.
1. Everybody passes in elementary school.
1. Some colleges take pride in having many freshmen fail.
1. Inevitable. No one is to blame.
1. The 6-3-3 plan. The three-year high school following three years of browsing without definite effort. The high school cannot do four years of work in three years, especially when it receives students who have been definitely trained not to work.

On the question, "Are failures due to high school or to the college?" the vote stood:

High School	-----	1
College	-----	14
Both	-----	46
Neither	-----	23



Pupil ----- 9

Home ----- 4

Whole Adult Population----- 1

Among the comments, these are notable:

(a) High schools do not develop the power of independent study.

(b) Colleges should examine entrants and emphasize athletics less.

(c) Some students have too much money and some too little.

(d) Lack of understanding between high school and college.

(e) The high school is responsible for its own failures and the college for its.

"Is there any marked divergence between the success of your individual graduates in high school and college?" On this question the vote stood:

Yes ----- 2

No ----- 102

Occasionally better in college--- 14

Occasionally worse in college-- 9

To the query, "Are you satisfied with present conditions?" 25 replied *Yes*, 80 *No*. One writer said: "Of course not. Never shall be, I hope. The relations between the high schools and colleges are better now than ever before."

Below appear the remedies suggested and the number of those mentioning each:

45. Send only good students to college.

29. More advisors in college.

22. Better teachers in college.

7. XYZ groups in college.

6. Boost scholarship in high school.

6. Make character a requirement for high school graduation.

3. Develop a sense of duty in family, state, and nation.

2. Clean up the frats.

2. Co-operation between high school and college.

2. Hold junior high school accountable.

2. Better homes.

1. Smaller sections.

1. Better breeding.

1. Supervise college teaching.

1. Do not admit pupils for athletic or social prowess.

1. Segregate college preparatory pupils in high school.

1. Home study.

1. Hard work and plenty of it for teacher and pupil.

1. Raise age of entrance.

1. Let college urge parents *not* to send children.

1. Closer relationship between Sunday School and college.

1. More home restraint.

1. Less money in freshman's pocket.

1. Compulsory study hours in college.

1. Send complete college records to high school.

1. Get high school principals who are more interested in scholarship than in athletics.

1. Encourage good teachers.

1. Student councils.

1. More testing in both.

1. More segregation in both.

I also sent out a letter to each of those schools whose graduates all passed in all of their first semester studies. In this letter I commended the principal for his fine work and asked how he did it. The number of letters sent and of replies received are shown below:

States	Sent	Received
Arkansas -----	2	2
Colorado -----	3	0
Illinois -----	3	2
Indiana -----	3	2
Iowa -----	3	1
Kansas -----	3	1
Michigan -----	3	2



Minnesota -----	3	2	3. Careful selection of teachers—5.
Missouri -----	3	2	4. Self-directed or home study—3.
Montana -----	3	3	5. Character reading—3.
Nebraska -----	3	0	6. Character training—3.
New Mexico -----	2	0	7. Pupils attend local college and
North Dakota -----	3	1	hence live at home—3.
Ohio -----	3	1	8. Rigidity in selecting pupils—pri-
Oklahoma -----	2	0	ate schools—2.
South Dakota -----	2	0	9. Small classes—2.
Wisconsin -----	3	0	10. Sixty-minute periods—2.
Wyoming -----	3	0	11. Supervised study—2.
-----	—	—	12. Mature students—all over 18—
	50	19	private school.

The smallness of this percentage of replies may indicate either that most of the principals of these fine schools have been moved or that the same high qualities which enable them to succeed also cause them to consign foolish letters unanswered to the wastebasket. At all events, be this as it may, the names of the honor schools from which answers came are as follows:

Arkansas—Conway Center and Mountain Home.

Illinois—Batavia and Chicago Training School.

Indiana—Alexandria and Froebel (of Gary).

Iowa—Fairfield.

Kansas—Cottonwood Falls.

Michigan—Alma and Hancock.

Minnesota—Aitken and Canby.

Missouri—Braymer and Vandalia.

Montana—Big Timber, Billings, and Kalispell.

North Dakota—Ellendale.

Ohio—Bryan.

I list below, in the order of their frequency, the causes to which the writers of these nineteen letters ascribe the success of their graduates:

1. Careful selection of graduates—8.
2. Close supervision of pupils—6.

13. Work-study-play plan. Long school day—school on Saturday and in summer—provision of experience to serve as soil for thinking—though 800 out of 3,000 lack home background, these factors keep them out of movies and alleys—2.

14. Socialized recitations—1.

15. Unit plan—1.

16. Careful adherence to N. C. A. standards—1.

17. Heredity of pupils—1.

18. Pupil leaders inspired other pupils—1.

19. Board of Education does not allow Superintendent to interfere in the management of the high school—1.

20. Luck—1.

Possibly the most useful answer came from a superintendent who said he did not know why his pupils had succeeded so well, but then went on as follows:

"This is a consolidated school located in a village of about 1800 people. Most of the people are in very moderate financial circumstances. About one-half of the high school students live on farms. Some of them come to us from forty miles in the country to attend this school. A few of them work for their board; very few pay for their board; the majority rent plain rooms and 'batch it,'



that is, do light housekeeping, singly or in groups. The average total cost of attending school, to these students, is about \$15 per month. These non-resident students come from farms which in many cases are merely settlers' farms only partly developed. This is wooded, lake country, still largely in the pioneer stage. Sixteen nationalities are represented in the high school. This gives the background.

"Our building is good but old, and we are cramped for space. The equipment is fair but far from lavish. For financial reasons our salary scale is low—\$100 to \$120 in the grades; usually \$130 to \$135 in the high school except for two or three special teachers. As you might infer, our teachers are young and relatively inexperienced.

"Now the results which you call 'this happy result,' may be ascribed to several things:

(a) An earnest desire, on the part of students, to obtain an education. Pupils and parents both feel that it is the open door to better things, better conditions in life for the students than the parents have experienced. Is this not the usual American feeling?

(b) We all work. Teachers give almost unlimited time, out of class, to students who are slow or who have lost time through absence. No work is allowed to be lost or gone over in a slovenly fashion. All work must be done and teachers see to it personally that it is done.

(c) At the end of each week a blue (it gives all concerned a touch o' blues) slip is sent to parents or guardians indicating each and every subject in which the student's work has fallen below standards for that week, and asking for them to see the principal personally to talk it over. Thus no student can escape

his responsibility and his parents' knowledge of it for a single week.

(d) We are a family at study. Teachers and students work together in a spirit of comradeship. The old time spirit of service rules our teachers. The modern sense of no responsibility outside the formal class exercises finds no place in our plans. We all live to see our work develop. While we maintain excellent discipline, it is not arbitrary but of the sort that students realize is for the good of all.

(e) We maintain many extra-curricular activities which show we believe in good times as well as work and which affords opportunity for each student to develop any special talents he may have. We have drama, debate, declamation, girls' basketball, Camp Fire Girls, Boy Scouts, football, basketball, baseball, track, orchestra, glee clubs, etc., with many inter-school as well as intramural contests, teaching good sportsmanship, and learning to do team work, and meet others in vital contact. This all keeps them alert and gives a healthy ring to what the school does in academic lines.

(f) Finally, we maintain, largely because of lack of space, a rather old-fashioned curriculum. We have no modern languages, no course in agriculture or in commerce, no chance for a student to select 'soft' courses. Our graduates have, as a rule, the following: Four units of English, two or three of mathematics, two to four of science, three of history and social science. The only elective is between manual training or home economics and Latin. All are prepared to enter college and all have taken a stiff course in high school. All have learned to study.

(g) I might have put first what I am putting last, the sterling character of our



young people and their parents, something of the old pioneer spirit."

I will close by summarizing in a few statements the results of this enquiry:

1. High school principals think that the failures of college freshmen are due chiefly to the removal in college of that personal co-operation and sympathy which is maintained in high school, to the fact that too many low grade students are admitted to college, and to the poor quality of too many teachers of college freshmen.

2. Forty-six principals think that failures are due to both high school and college, twenty-three to neither, fourteen to college, and one to high school.

3. Most principals agree that students who do well in high school also do well in college and vice-versa.

4. Though some students deteriorate in college, the reverse is true of a much larger number.

5. Just as the high school is responsible for failures in the first year of high school, the college is responsible for those of freshmen.

6. While most high school principals are dissatisfied with existing conditions,

they believe those conditions to be better than ever before.

7. The chief remedies suggested for the further improvement of these conditions are (a) to admit to college only such students as are likely to profit by college residence, (b) to set up in college better machinery for advising students, and (c) to insist that the qualifications of freshmen college teachers be at least as high as those of the high school teachers under whose direction students are prepared for college.

8. A few principals suggest what may be called the democratization of the college. By this I mean that the colleges shall abandon the principle of *Diabolus postremum capiat* and adopt as their slogan *Live and let live*. In other words these heretical principals suggest that everybody who has reached the age of eighteen be eligible for admission to college, that XYZ classes be set up in college, and that the aim of the college be, not to train up intellectual and spiritual giants, but to give to every individual within their gates as much training as the gods in their infinite wisdom and mercy have ordained that he shall be capable of receiving.

#### Earlier Numbers of the Quarterly

*This office has on hand a few copies of each of the previous issues of the QUARTERLY. These can be had at the price of \$.75 each.*



## Why Students Fail in College\*

H. GLICKSMAN, UNIVERSITY OF WISCONSIN

More and more the world is dissociating specific phenomena from specific causes. In the natural sciences, scholars and practitioners show decreasing dogmatism in assigning effects to fixed antecedents. In the field of medicine, for example, we are told that modern theory and practice frown on the ascription of a given ailment, known by an orthodox name, or characterized by a group of symptoms, to a disturbance in a certain organ of the body. The patient is conceived to be healthy if all his organs and all his functions co-operate and harmonize in the interests of that mysterious result which both the skilled physician and the trusting man on the street call by the magic name of health, a word whose scientific and popular connotations are, it sometimes appears, not immensely clearer now than they were a century ago. In the social sciences, also, we have found, within the past hundred years, that it is misleading to attribute poverty, moral degradation, crime waves, shiftings in population, or any of the other social phenomena, to isolated causes. Reformers and social workers, professors of sociology and economics, and unattached writers in those fields, are beginning to ascertain that the body politic and social, like the body physical, is an organic unit. Authorities on the Great War talk more glibly and convincingly when they name its proximate provocatives than when they discuss its underlying reasons.

In the Utopian world, where evils lend themselves to remedies the moment they are discovered, the relation of cause and effect is, to be sure, far simpler. Those who hope to find a single source for every taint, and who therefore believe that the taint can be removed by abolishing or modifying the cause, are the ruddy optimists of latter-day philosophies and cults. They are swarming the lobbies of the legislature; they are filling the newspaper columns and magazine pages with hopeful clamor. We hear their invectives against the embarrassing skeptics who demand basic facts. A doubting society, trained and matured in the inductive research of science, is resisting their importunities, doing its best to temper their enthusiasm with moderation, their illusions with insight and judgment.

Have we, in the field of education, kept pace with this movement in modern science: this movement away from rigid categories and toward the flexible pursuit of reality? Are we abreast of the current which is directing attention to the spectacle of the wholeness, the unity of life? Are we appreciating that the symptoms which we encounter, sometimes with discouragement, in our professional sphere, arise from those common roots intended to sustain the entire organism?

It is asked, for example, why students fail in college. My own temptation is to reply, with summary finality, that there is no universal source of all scholastic failures; nor, indeed, any typical or segregated reason for the downfall of any

\*A paper read at the North Central Association meeting in Chicago, March 16, 1927.



one student. Yet I know, also, that, as there is danger of exaggerating individual cases, so too there is danger even more pernicious, of wafting the difficulty into thin air with meaningless generalizations, and of refusing to aspire to relief merely because the problem is intricate and formidable. There is point, therefore, in recognizing the presence and the co-ordinating power of multifarious conditions, and of separating them for the purpose of discussion.

Among these palpable causes there is, first, outside work (so it is denoted in the administrative lingo): lucrative employment, in other words, necessary to defray, in whole or in part, the burden of college expenses.

Another cause is defective physical health, a virulent root of trouble. Youth, conceiving itself immortal, selects its diet with abandon, and wears silk hose in zero weather.

Another is mental disturbance: worry over bad news from home, for instance; chagrin arising from blasted social aspirations, from failure to be accepted by one or another fraternity or sorority, or other group; the cruel mental attrition and exhaustion that proceeds from fussing over irrevelancies (whether in or out of the curriculum), the victim unfitting himself, through futile apprehension, for the labor of each successive day; loneliness, social awkwardness and the humiliation attending it; the pathos and tragedy of maladjustment.

Another reason why some students fail is that, in these days, many enter college who are not real students. They are unable to apportion their time to their duties; their methods of study are infantile. Powerless and bewildered, they "scatter" instead of concentrating; they procrastinate and sidestep. They

sink beneath the onus of organizing text and lecture and laboratory materials, of remembering and assembling facts, of merging general principles and minutiae. Men and women now in their forties can recall the days in which one boy or girl in a large family, customarily the most promising, went to college. The others remained at home; and soon after winning the coveted high-school diploma, if they progressed that far, they qualified for a weekly wage. Everyone now marches collegeward: the more studious and the less studious, the more ambitious and the less ambitious, the more capable and the less capable. The proportion of failures is, accordingly, not diminishing. Is it not a miracle that the increase has been so meager?

Another cause is the hobgoblin (for such it is) of extra-curricular activities. The "activist" (the word has recently been coined to identify the new species) is abroad on the campus, brewing propaganda, both open and insidious; deluding faculty and fellow-students together. Pick up, any morning, the current number of an undergraduate daily, and you will perceive, at a glance, that everything in the world tempts the student, notably the untrained and unresisting freshman, away from his studies. There are athletics (a score or more of various kinds), and dramatics, and campus politics, and musical activities, and undergraduate journalism, and debating, and committee work in secret societies. When shall even an energetic student spare time for study? A callow freshman, ripe for the midyear exodus, told me last February, after a semester of atrociously deficient grades, that he had ventured into freshman football because he feared disgrace. "I was afraid," he confessed on cross-examination, "that the folks at home



would be ashamed of me if I didn't tackle something beside my studies."

Another cause is the lure of "college life," as it is vaguely called. College life! What implications in that ancient phrase: implications of spiritual beauty, of comradeship and friendship, implications of moral flowering, for the strong youth; of disaster and corruption for the weak! Pleasure and amusements, golden hours of gossip with roommates and housemates, attendance at theaters and athletic contests, playing games, dancing, motoring, week-end trips: these enhance the training, and enrich the lives, of the hardy members of the academic flock; they are deadly to the more susceptible.

Another cause, not entirely distinct from the foregoing, is contact with undesirable companions. I am not thinking of the student who "goes wrong." Of that class there were, I should say, a larger proportion twenty years ago than now; and the group, if not extinct, is happily waning. What I am alluding to is association with the noisy and the frivolous: conspicuously with fellow-roomers, near and convenient enough to imperil. The minutes fly when good fellowship fills the air; and books must wait till eyelids are heavy and youthful brains are struggling to elude the call of sleep.

Can a recital such as this, coming from a university official, be regarded orthodox and complete without a word of blame for the preparatory schools? We educators pass responsibility, not onward but downward. Some students, to be sure, fail because, or partly because, they suffer from a misconception, injected into them in earlier years, of college life and college aims. The extra-curricular virus has filtered down, and,

in the high school years, has played havoc with intellectual stamina, and with habits of application. Freshmen frequently declare that they were "out for everything in high school," and never had time, or took time, to settle to genuine work. Often, too, they say that the demands of the high school curriculum were too lenient, and that the break between preparatory school and college has been impassable. Of these explanations, I am, almost uniformly, more ready to accept the self-depreciative than the self-defensive. Our secondary schools, that is to say, both public and private, maintain and enforce standards severe enough for the more studiously disposed. The student who is side-tracked by extra-curricular obtrusions in high school, and by social hilarity during the high-school age, is, from every point of view, the weaker student. All of us, young and old, must, throughout life, defy siren strains and hold to the straight path with eyes glued ahead. Those who possess backbone plod right on; the invertebrates crumple in their shaky tracks.

There have appeared, within this conspectus, the student who cannot and the student who will not. Yet nothing has been said, *verbatim*, of plain indifference and neglect, irrespective of competing interests or attractions; of that sheer diabolic inertia which evades the injunction, "Hold fast to the things that are good." President Coolidge, in his first annual message to Congress, admonished that "there is an inescapable personal responsibility for the development of character, of industry, of thrift, and of self-control." The gospel is needed in the academic community, as in the civic. There are no substitutes, and no vacations, for character.



Such are the several causes. If not exhaustive, they surely comprise the major elements weighing against success in the curriculum. In diverse students, however, they operate in diverse proportions, each case having its individual complexion. Countless combinations are at work fashioning the triumph or the debacle of each of us in our multiform roles and obligations. People succeed or fail in business or professional life, men succeed or fail as husbands, women as wives, according as the resultant of the forces so at work is on the right or the wrong side of the ledger. And, by the same token, in the manifold relation between the college student on the one hand and his attainment on the other, scholastic success is the outcome or quotient of a fraction, a ratio. One member of this ratio, the numerator, if you will, comprehends everything, past and present, that he has brought to bear upon the vanquishing of his task. That factor includes many elements. It includes heredity, a subtle web of forces and influences, some of them shadowy, without which no individual can truly be assayed. It includes his immediate environment; and, too, the broader environment since the day of his birth; the care with which his home training has been directed; the tone and temper of the home atmosphere; the ineffable sway of family and group tradition; the guidance in the grades and in high school. It includes the degree of intellectual and imaginative curiosity which he possesses when he first enters college, and the resolution and firmness with which he has fortified his spirit and girded his mind. It includes his willingness, and eagerness, to renounce pleasures, distracting activities, and other extrinsic interests for the thoughtful

and devoted work that is indispensable if he is to feed and satisfy his mental hunger. It includes his recognition (and if he is destined to be an earnest student, it will be established early in his college course) that the curriculum is the primary magnet, no less than the primary duty. It will include a large portion of moral courage and intellectual honesty, enabling him to cling fast to his resolves, and to guard that vision of self-improvement and advancement which has impelled him. It cannot be denied, moreover, that this entire factor must include, too, the fortuitous tricks of Fortune: his pecuniary situation, which may be any state between affluence and indigence; the state of his health; social surrounding and involvements only partially controllable.

In this ratio, what is the denominator? It is, I presume, the task, or the group of tasks, or the series of tasks, to which the student must address himself, in the performance of which he must invoke—or, at least, employ—all, or some, of these numerous elements. It may be a single, a separate task, assigned in one course by one instructor, for which the student is answerable on an appointed day; or it may be the task of mastering the integral work of a given course, or compassing all the work in all the subjects of a given semester. Whether, in short, the job contemplated by the denominator is one task or a collection of tasks aggregating a whole year's work, or the work of a whole college course, the issue is the same. At a specified time the student, acting in a student guise, attacks labor and responsibility with everything he has—heredity and environment, ability and character, and the strength of all these interfused. The student, for example, who tells me at



the close of a calamitous semester that he failed in mathematics, or German, or history, because he lived in a noisy rooming-house, has told me only a small, though a true, part of the story. He has, no doubt, in his immature and shame-faced way, been thoroughly sincere. He is excusing, or attempting to excuse, himself for his lapse, however, with one detached, theoretical cause. He does not appreciate, and I dare say that no instructor or dean or other official can, in the circumstances, convince him, that if he had come to the task represented by that semester of mathematics, or German, or history, armed with the enduring virtues that a student needs, his noisy surroundings would have been, in effect, a negligible accident. The question, in other words, always is: What factors are material and determining? What, moreover, are the variables? The all-round, sober student overcomes disturbance. The master of his fate, he is, in like manner, master of many of the conditions contributing to it. There are desperate cases, indeed, in which, unable to suppress intruders on their peace and quiet, conscientious students have, by high example, induced respectful submission to loftier standards. Outside activities — athletics, fraternity life, and lighter social amenities—are often fatal to the student whose numerator is poorly stocked and balanced. These pre-occupations and interests, however infelicitous for some, are, on the contrary, a stay and a prod for others. The fit will survive and the unfit succumb. Brains and character can defy all of the untoward influences and hazards enlisted by failing students to explain and exonerate. I recall that glum procession of low-grade freshmen and sophomores who, along with their records, passed in

review before my colleagues and me during ten days last February, reciting in varied succession the misfortunes, purportedly beyond their control, which had been their undoing; and I affirm, as I look in retrospect over those students, their records, and their pleas, that no depreciation, no defense which I then heard, contained facts peculiar to the careers of weaker undergraduates. Honor students and "flunkers" have, in the risks and obstacles of this tough old world, much in common. Ill health, necessary lucrative work, troubles at home, uncongenial surroundings, mental disquiet, are bogies that loom in the paths of high and low alike. I believe, for example, that though outside work is a handicap for the poor student, it is a stimulus for the good one. I believe that preparation in inferior high schools is a disadvantage not to be ignored; and yet I know, too, that many brilliant students enter from faulty schools, and that our books are freighted with failing students from secondary schools of strong and well earned reputation. I have seen boys and girls matriculating from mediocre schools who come to us roused and transformed by the prospect, the challenge of a course of university studies, a challenge which is the more intense because, reinforced and animated as they are with character and vision, they feel, deep in their natures, the poverty of the equipment they have brought.

This is, to be true, unpopular doctrine. The present penchant, countenanced and encouraged by the prevailing social philosophy, is to blame society and to exculpate the individual. The zeal for investigation, the vogue for establishing and perpetuating reform organizations, the sentimental notion that people come to grief not because of what they them-



selves do, but because of what somebody else has done to them; the too frequent substitution of sympathy and hysteria for calm analysis, all of these tendencies have caused us to prefer motives and processes outside of the individual to those within. There is a powerful temptation, I admit, for a dean or other advisory officer, when he gazes about and beholds the riot of intention and performance on a college campus, with its odd mixture of purposefulness and futility, to indict and convict a pet dragon for threatening the life of the fold; and he yearns, like a hero of olden days, to slay the condemned offender at one fell blow and secure tranquillity for all time to come. There is a strong inclination, also, to please and coddle students, and the parents of deficient students, by announcing that their faults are external and remediable; that no vital roots in their sons and daughters have been menaced. We are afraid to say that students are not college material. We suppose, sometimes, that we dare not give offense, and we hesitate, in other cases, to blight young hopes with diagnoses and forecasts for which it is feared that ample and acceptable evidence may not be forthcoming. Caution is of the highest importance in the study of student problems, and in the assessment of the discrepancy between the numerator and the denominator. We must insist, however, that the student be envisioned in his entirety, accoutered and braced for the battles that he must fight and win. We must insist, finally, that the readiness to wage the combat is the supreme test of the college man or woman, and that the connotation of "college man" and "college woman" must rely on academic and scholarly, not on popular and superficial ideals.

The reply is made that undergraduates now attending American institutions of higher learning have long enough been doctored with sermons on discipline and culture, on the magic of method and the recipe for intellectual salvation; that they are saturated with the preachments of their elders; that sweetness and light is in peril of becoming a thorn in their sides. By-products of the Great War, they are, many of them, be it said in sadness, drenched with the cheerless notion that something is irrevocably wrong with them; whether they accept the blight with resignation, or deny it with revolt, it is still clear that the programs of wholesale denunciation with which we older folk are dosing them have left disillusioning, even vicious, traces. They require, it is here and there maintained, a new pedagogy, scrapping prejudices and outworn conventions; and conforming to new demands. Whence shall come the doctrine and the code for the new ventures? They cannot spring full-armed from the head of an educational deity. The god of learning, prolific as he is, works no such miracles. Experiment, a boon in educational as in physical science, seems the only answer. And American educators are, in fact, turning to experiment for the blazing and opening of the trail ahead.

At the University of Wisconsin a project has been on foot, and is, indeed, now functioning, to study undergraduate orientation and progress through the technique of an experimental college: a unit separately identified in administration and curriculum, providing a distinct course within the College of Letters and Science, and accomodating two-hundred and fifty students. For the first year, beginning in September, 1927, about



one-hundred and twenty-five freshman boys will be selected (the basis of choice securing a reasonably veracious miniature of the male student body) who will lodge and board in a designated section of the new dormitories for men. These young people will live together, and be taught together, by an appointed group of instructors, having class-rooms and conference studies in the same section, some of whom, perhaps, if personal attachments do not prevent, will reside upon the allotted academic premises. With one faculty member for every fifteen students, intimacy of contact, and sympathy and understanding, between teachers and undergraduates, will be a constant aim. The course will comprise only the freshman and sophomore years, the curriculum of the first year featuring, it is hoped, possibly in addition to other work, a survey of some ancient or pre-scientific civilization, presumably that of ancient Greece; that of the second probably offering the study of a post-scientific or modern civilization, doubtless that of the United States or modern England. President Frank and Professor Meiklejohn, who have been the moving spirits in the plan, do not pretend to prophesy, item by item, what the experiment will add to the definite code or the abstract theory of education. They only hope, upon sufficient ground, that new light as to ideal college curricula, as to improved methods of teaching, as to the normal relation of undergraduates to colleges and universities, will dawn. Beyond question, this venture will adduce suggestive facts tending to show why some students fail in college. A close survey, within a measurable area, affecting a limited group, should clarify the bearing of undergraduate life upon undergraduate achieve-

ment. I have often thought, as students sat at my elbow recounting their vexations and their handicaps, in many cases striving honestly to assist me toward a fair and helpful opinion, that I have been too far removed from the center of action; that their situations have been conveyed to me through an obscuring medium; that I have looked through a glass darkly; that the warping and upsetting sway of personal bias, and of the self-commiserating impulse, has distorted the picture quite out of contour. At such times I have cordially wished that I might fraternize with the student for a week or more, studying his habits, listening to his off-hand and spontaneous comments on the incidents and spectacles of daily life; that I might hear him discuss his friends and acquaintances, and listen to his criticisms as he scans the latest news, and, above all, hear his reflections on his studies and instructors. I have thought that I should like to hover over his shoulder as he sits down, of an evening, to ply his book (assuming that I might, by some magical means, render myself invisible); and to observe, with a mystic tutelage, like Minerva tending Ulysses, the operation of his mind, ascertaining, finally, what degree and quality of attainment satisfies him that he has dispatched his job. At the close of a week of such attendance, I might, conceivably, help that student as I should like. And what a glorious opportunity to sound his depths, to probe the heart of his mystery! What a marvelous chance to prove that raccoon coats, student-owned cars, jazz dancing, and the cult of cosmetics, are only ripples on the surface; and that if we hope to learn what is wrong with undergraduates we must distinguish symptoms from disorders. Give me ten



days of intermittent comradeship with an eighteen-year-old freshman boy studied in this wise: a boy carrying, let us say, a program of English composition, elementary French, English history, and general chemistry. Let me earn his confidence and receive the frank outpouring of his mind and spirit, and thus gauge the talents and predilections residing in him. Let me, by all means, have scope and occasion for timely commentary on the great truths, all touching on the building of mind and character, which we teachers have inherited from the past and which we seek to perpetuate for the future. In the course of that ten-day ministration, I should wish to endow that boy with a stable standard of accomplishment, a beacon-light throughout his college course. Before the close of his first semester, moreover, he should, if his several instructors lend him proper stimulus and directions, and if the spark of human and divine curiosity is not extinct, be able to pronounce an educational gospel of his own. And, paraphrased for brevity and convenience, it might read like this:

Like other students, I have suffered under the weekly goad of the freshman theme, composition being a severe task, requiring exactness of thought and painstaking form and structure. I know, however, that clear thinking and clear expression are habits, and must be trained; that these stipulated written exercises, so obnoxious to many, present a brilliant chance for self-development. I am commencing, also, to perceive that this recurrent prod to express myself with order and cogency and grace can uncover depths in my nature and illumine dark corners of my mind. The world of ideas is larger, and life is more interesting, than I had ever before supposed. The compulsion to express is, I find, gradually begetting an urge to express. Like other students, too, I

have groaned under that vast mountain of facts in English history. The storing—and, still more, the marshalling—of that material is a heavy drain on my energy and patience. But lectures and class-room discussions, topic-writing and collateral reading, have revealed to me the rewards of system, and the value of learning to convert a pile into a file, of classifying odds and ends of knowledge under prominent headings. Apart from this discipline, this training in organization, my history course has opened the windows of my mind, and has admitted me to the rich and alluring views. Elizabeth the monarch, Caxton the printer, Wyclif the reformer, Cromwell the rebel, Laud the conservative, Mill the economist, Darwin the scientist, Shakespeare the poet,—all of them are, it appears, with countless others, the donors of my intellectual and spiritual existence. History is not, as I once immaturely believed, a jumble of facts and dates, but a thrilling and colorful panorama, instinct with life. Like other students, too, I have toiled, with frequent murmurs, over French conjugations. I am growing conscious, however, that skill in the use of one's native tongue is enhanced by acquaintance with a foreign tongue, because the native language is acquired more through the ear than through the mind, and foreign-language drill conduces to a more equitable partnership of mind and ear. I rejoice, also, that, as I become more proficient in French, I shall better appreciate the essential genius of a foreign race, one that has contributed inestimable benefits to civilization. Whether or not I use this language in practical transactions (and I trust I shall), the reading with moderate fluency of the speech of Joan of Arc and Napoleon, of Voltaire and Renan,—and, indeed, of William, the Norman conqueror of England, is a glowing intellectual adventure, irradiated with the light that never was on sea or land. And chemistry, the modern heir of historic alchemy! Like other students I, too, have pouted over the laboratory note book, wishing, in fitful moments, that chemical formulae



and symbols might be dumped wholesale into the ocean. How glad I am that this childish petulance disappears so soon. For I delight in the orderly beauty of this science; in its spur to minute observation; in its disclosure of the hidden and inherent elements composing the body of man, the forms and objects in his natural and artificial habitat, and the kaleidoscopic things he lives by; in its groping after ultimate truth as it speculates, first, on the nature of this palpable world, as it excites, then, a more scholarly craving to transcend the solemn veil drawn between the Things Seen and the Things Unseen. The mystery of matter, in its variety and complexity and unity; the mystery of force and of universal law, are unfolded here. Never before have I realized the pregnant meaning in the familiar things that I see and touch. Chemistry, indeed, trains the intellect. What is more, it expands and refines the soul, beckoning away from obsolete and superstitious terrors, allaying forever the fancied conflict of science and religion.

You pause after that imaginary outburst, wondering from what company of angels, from what far-off, celestial domain we shall import the undergraduate who can give it utterance. Where shall we find him? If you travel to the ends of the earth, and search sea and sky and air and finally bring him in triumph home, you may still be doomed to know, in sorrow and disappointment, that, though he *can* phrase those high and eternal principles, he *will* not. To be branded "high-brow" or "grind" by one's college mates is excruciating cost, even for an education. That monologue has, to be sure, an exotic ring; and its vibrant conviction, I confess, seems a hollow echo of a visionary world. Ideal it is; but ideals and dreams have heretofore served as driving power for mighty deeds. Contend, if you like, that no

student will ever speak those words. It has, none the less, become the duty of leaders and officials in higher education to detect and set apart, early in the college course, those young men and women whose native enthusiasm and perception and industry fit them, potentially, to frame those very sentiments; of whom, in a word, we can expect that level-headed idealism, with its crown in the clouds and its feet on the soil, which is the goal, always, of liberal training. It has become our responsibility, further, to lend to these qualified candidates the treatment suitable to their gifts; and, still further, to bring home to the sense of those whose enthusiasm, perception, and industry fall singularly short, that they can improve their time to better advantage in a less academic setting. The denominator in the significant ratio is fixed and constant; there is, indeed, a common denominator: the faculty ~~can~~ set the task and the student recognize it. The numerator wavers: it is a volatile thing, which higher education is now in the throes of evaluating. Yet hope lies within the horizon. It seems likely that more sympathetic and scientific knowledge, by instructors and officials, of the students they have been professing to judge, will go far toward conjuring order out of chaos. It may be that a system embodying the principle of the proposed Wisconsin experiment will accomplish, easily and consecutively, what present machinery can contrive in only occasional spasms. We need, in any event, types of instructional and administrative control fitted to the more and more cosmopolitan and unsettled character of student population. We need, in brief, more lucid proof and stronger assurance when we say that



this or that student is not of college calibre, when we declare why this or that student has failed in his studies, when we assert that this or that student is unexposed to the Puritan faith that a college education is won only by rigorous effort and self-discipline.

*Per aspera ad astra*, reads the Latin admonition: through difficulties to the

stars. Let us not abandon comfort. We marvel, with humility, at Socrates and Aristotle, at Abelard and Alcuin, teachers of long ago. Should we not, with the same breath, give thanks that we have forged so far ahead of the stiff and pedantic formalism and the iron education of the more recent eighteenth century?

### Back Numbers of the Proceedings

*In the September, 1926, issue of the Quarterly attention was called to the fact that the office has on hand a goodly supply of back numbers of the North Central Association Proceedings. Many of these constitute veritable mines of educational materials suitable for teacher training courses, study club work, and libraries. The list of these Proceedings is as follows:*

Issue	Conspicuous Features	Issue	Conspicuous Features
1921-Pt. I	The Function of the High School Principal	1924 Pt. II	Referendum Vote Respecting Fifteen Hours in Education.
1921-Pt. II	Curriculum Reorganization.	1924-Pt. III	Report of Committee on Standards for Reorganization of Secondary School Curricula.
1922-Pt. I	Teachers in Accredited Schools.	1925-Pt. I	The Pupil Load in High Schools.
1922-Pt. II	Bible Study Courses for Secondary Schools. The High School Course in English.	1925-Pt. II	Standards for Reorganizing Secondary School Curricula.
1923-Pt. I	Size of Class and the Teaching Load.	1925-Pt. III	Our Secondary Schools
1923-Pt. II	Junior High Schools and College Entrance Requirements.	1925-Pt. IV	The Undergraduate Curriculum in Education.
1924-Pt. I	Accrediting Private High Schools. The High School as Judged by its Students.		

*In order to encourage the use of these bulletins, the Board has decided to dispose of them at \$.25 each. Address North Central Association Quarterly, 420 University High School Building, Ann Arbor, Michigan, enclosing remittance with order.*



# The Junior High School Under the Influence of College Entrance Requirements

BY F. C. LANDSITTEL

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Reconstruction is the watchword today in education from its most elementary to its most advanced level. That such is the fact comes about of necessity from a fairly well matured new conception that forms the central purpose of all educational effort. This newly conceived purpose is attainment through school processes, high and low alike, of a realistic kind of experience—a more meaningful kind, since gain in learning is known thereby to be insured. We have come in these latter days to view all knowledge as being home-made. It is built up by each individual for himself; it comes entirely from his own activity, issuing from the purposes that he entertains. Its character is dependent in no uncertain way upon what these purposes are. "Each new temple nobler than the last" is the ideal, but anyway each new temple through remodeling the last or reconstructing it according to what experiences may ensue.

We want the life impulse, the normal human drive to be operative all the way from the home origin outward into the wide world. We see on this account kindergarten and first grade in terms of more real continuity of the characteristic life of childhood. We labor with all diligence to develop by a process of reconstructive research a curriculum for the grades that will maintain the fullest possible measure of normal living, by exalting normally purposed child effort.

In recognition of differing aptitudes and interests, and especially of the moving influence of the life career, we are rebuilding the program on the secondary level with gradual increase of provision for differentiation as it leads upward, and not without regard for its fundamental continuity.

In higher education the same characteristic activity of revision is strikingly in evidence. An instance that is little short of amazing seems to point to the ultimate disappearance of the traditional four-year college, leaving junior college only to intervene between the high school and the university type of higher institution. Wisconsin is planning and experiment, we are told, that re-shapes in a striking way the first two years of collegiate education, and that seeks to utilize for the purposes of modern culture the civilization of the ancient Greeks. On the upper professionalizing collegiate level we find nearly everywhere marks of regard for the modern vitalized and realistic, as opposed to abstract and theoretical, type of education. Among these may be mentioned the case method in law, clinical and other laboratory practice in the scientific profession and courses in commerce and engineering that co-ordinate experience gained outside the school with that gained inside. All the way along, be it noted, without stopping short of the highest reaches of the process of education the work of reconstruct-



tion is being vigorously pressed. Nowhere today, excepting in a few scattered places over which the aristocratic ideal or some more crass sort of ignorance holds sway, is to be found either a high school or a college that is content to shape itself according to any other standards than those signifying the kind and measure of human powers demanded by the work of the social world.

The junior high school, when rightly understood, must be recognized as a development in the fullest sense integral to the process of educational reconstruction that manifestly is going on, and that is manifestly general. It is not a divergent, go-it-alone type of institution in the series for purposes of education that a continuously changing civilization calls into existence. In the present discussion it is to be looked upon as presenting none of the aspects of a martyr to the demands of the schools above; it only seeks on the contrary those adjustments that may appear upon mature consideration to be generally advantageous. Between it and other units, whether higher or lower, there can be no fundamental conflict. In its own sphere of action, where it endeavors to offer to the masses of pubescent youth fittingly rich and necessarily varied opportunity, and to foster by appropriate means thorough learning and social integration, it should enjoy the sympathetic aid of all other units. It is looked upon as experimental; but the fact must be borne in mind that it is but a part of one monstrous general experiment that must necessarily look toward mass production in education.

Of the entire enrollment in this intermediate unit upon which we wish now to center this discussion, those who go on to college obviously form a contingent. This being the obvious fact, the inference be-

comes almost equally obvious, that preparation for college is one of the necessary appertaining functions. Although not immediate nor fully defined it is not to be lightly dismissed, as seems to be the disposition here and there. Grades seven to nine in almost any school system embrace a portion of future entrants into the colleges that is eminently recognizable, since it almost always makes up very materially in importance what it lacks in size. Something must be done for these that is appropriate to their probable future, and their case does not seem to call loudly for experimental procedures.

The problem that we face would be a relatively simple one if the group of college entrants were indeed readily determinable. There are the patent few who are destined to be sent to college, and along with these the few more whose interests and studentship stamp them relatively early as candidates also. The sum of the two is augmented month by month, if the school does its work well, by those in whom good teaching and wise counsel have formed the go-to-college purpose. It is these who are rescued from throwing themselves prematurely into the maelstrom of the world's work that form the complicating factor. And, when it is remembered that the rescue in the cases of many is delayed until the very eve of departure from the junior high school, and of many others even much beyond that, it must appear all too clearly that these go forward toward the college furnished with only partial equipment for their newly chosen student career. Hitherto they have been influenced by world demands as against college demands, in so far as remoter demands of any sort have entered into their conscious reckoning.

There is patent conflict between these



two. The requirements for college and the demands of the work-a-day world are like two millstones between which the secondary school in both junior and senior divisions is perpetually ground. There is a saving view of this milling situation that may be taken, however; it may as well be a shaping as a crushing process. This more intelligent view happily prevails. It is indeed precisely the lines of this shaping that constitutes our present problem.

The colleges have well-known preferences as to the subjects that are offered for admission; the non-academic world puts a premium for the most part upon other subjects. The colleges insist upon mental powers of somewhat cultivated order; the world, too, voices this same want. Put in the most commonplace terms, the college and the world alike want people who can do head work. Both alike keep bringing the challenge everlastingly: give us from the schools substantial and sound results. In this basis of agreement, I fancy, there is to be found a point of departure that offers sadly unappreciated possibility of at least partial elimination of the point of difference.

Before attempting to show how this result possibility may be brought to pass, we must note a bit more explicitly the nature of the common demand. As previously suggested, it stands in contrast to specific subjects as constituting the best learning, since it has primary reference to a training that comes through learning. And what manner of training may this be? It is a kind that comes from continuous practice in finding matters of fact and using these in forming intelligent judgments regarding possible courses of action. That is what we do when the division process instead of multiplication

is chosen in a simple arithmetic situation, or when Webster is believed in rather than Hayne. The training that we refer to then is none other than that which signifies capacity to do sound thinking. This possessed by any young person who presents himself at the door of either an employer of workers or a college entrance official will go a long way toward gaining him admission. In neither case would the question be pressed half so vigorously as to just what the individual happens to know.

The educational value to which we have been giving attention is a discipline, but it is quite opposed to that older conception which found discipline peculiarly in specific subjects. It is the discipline of a *how* and not of a *what*. We would not go so far as to say with the Committee of Ten that for the purposes of a general education one subject is as good as another; but we would say with Dewey that there is discipline in any subject for an individual who cares for that subject. Rightly taught manual arts may afford, along with patent practical skills, a training that enters into preparation for engineering. Geography on the same basis of good teaching may yield, besides important matters of information and understanding, training that is essential to a student career in physical or in social science, depending upon the direction of emphasis. Mathematical thinking, so long as it really is mathematical thinking as against mechanical performance, if it is done in terms of arithmetic along with algebra, and if it involves also certain primary concepts of geometry, trigonometry and even calculus, will meet better the demands of the world and may furnish possibly greater competency for college mathematics than algebra alone. If we teach with primary regard for



growth of the individual, as the most advanced educational theory of the day is well known to suggest, we will seek as the immediate outcomes of teaching elements of training, or mental habits of the kind that we are endeavoring to center attention upon. Truly these can never displace the factor of content, generally speaking (they necessarily imply it, on the contrary); but with elevation of these as objectives, subjects as subjects, and especially particular subjects in the same general field, must inevitably appear less important.

There is food for thought, I verily believe, in the suggestions just offered. Their obvious import in the case of the secondary school lies in the direction of a most thorough-going kind of instruction. Perhaps nothing could be mentioned as having a more significant bearing upon the security of the junior high school's position among institutions of education than the factor of thoroughness in its teaching. Doubt regarding its helpfulness in the direction of scholarship is the chief obstacle in the way of its progress. A spirit of warm friendliness towards the institution accordingly prompts our bringing this factor to relatively prominent notice. There may be some lack of clarity in what we have said thus far as regards just what we mean by it.

In this presence it may be taken as sufficient only to enumerate the factors that enter most significantly into thorough teaching. There especially must be brought about the completest possible mental concentration at a given time upon a definite thing. In this we have vigorous intensive reaction, which presupposes a stimulus full of interesting meaning. Reorganization of experience follows thorough thinking. Repetition,

with variation of both mode of approach and form of application, is also necessary. There must be initial over-learning, and re-learning at intervals. With thoroughness before us in the form of this simply delineated perspective (of interesting meaning, concentrated thought with concomitant physical action, and oft-repeated application) we wish to inquire whether or not there is inconsistency between it and the exploring function of the junior high school, which is so much stressed in current practice.

Insofar as there is conflict between these two ideas it must arise from a misconception in the latter case. If exploration means flitting about from one thing to another with only superficial treatment of any of the multitude of things touched upon, then it is an idea utterly out of harmony with thoroughness. The school that is dominated by a notion of this kind comes to be like a herd of cattle that roves excitedly over a knee-deep field of grass, and that comes out at the end of the privilege less well-fed than if there had been more of intensive grazing in spots. Reasonably sound and thorough work may be done in the junior high school upon selected subjects or topics without limiting in any vital way the privilege of exploring. Exploration means study, and study means exploration. It is the wide compass through which our samplings extend, and their quality as samples rather than their multitudinousness, that are truly significant for exploratory purposes. A Phillipino lad could not find out half so well whether he would like apples by nibbling in a careless way over all the tables outspread at the apple-show as by taking healthful bites from a few well-selected apple types. So the junior high school pupil also may hope to discover in what



direction his interests and abilities lie by entering somewhat fully into things that are especially typical of the various subject-matter fields. This type idea is in fact the key to worth while exploratory or experimental courses, whether they be of the general or of the try-out kind. It saves them by giving them consistency with the ideal of thorough teaching.

The need that is urged on behalf of the junior high school of providing opportunity for widely varied subject matter contacts is entitled to respect. It enters necessarily into the sum-total of richly diversified environment which forms a prime essential to democratic culture. To the suggestion just made with regard to how seeming conflict between it and scholarly training may be obviated we have one further hint to add. It has to do with the browsing privilege, which is a feature of the general program of education for pubescent youth that is not by any means to be winked at. Taking into account the numerous applications of subject matter in various directions, the exploratory connections with untold numbers of other things, that enters into all really enlightening teaching, the necessary further sampling may be provided for sufficiently through the extra-curricular activities of the school. The assembly exercise is utilized by the wisest for this purpose, as are all manner of school-sponsored clubs, with organized individual guidance as the general engineering agency covering all. Due attention having been given to the factors just named, the possibility would seem to appear of dispensing with those more or less abortive sampling courses for which formal credit is given. We may feel, I should say, and in saying it I am identifying myself again with the junior high school advocates, that when we have strengthened

our position by action in the direction of sounder instruction, a more respectful attitude may be expected to be taken toward needs that others may be called upon to meet.

There are, in fact, such needs. They arise in the main in connection with subjects that for the purposes of general education seem altogether good, but that are called into question when presented for college entrance. The practical and fine arts fall usually in this category of doubtfuls. The same is to be said of general mathematics and to an extent also of general science and general introductory biology. Unified social studies is coming up only to fall similarly under the eye of suspicion. Finally foreign languages, if begun earlier at the instance of high authority, find credit forbidden by essentially the same authority in any larger than the traditional measure of four units in any single language. These subject difficulties center as a matter of course almost entirely in the ninth grade, since this is the only junior high school grade to which college entrance requirements as now constituted apply. It is most acute, too, in the smaller schools, the limit of differentiation of work here being necessarily relatively narrow. We shall endeavor to assess the difficulty in the case of each subject that comes prominently into question.

Someone is quoted in the recently published fifth Year-book of the Department of Superintendence as saying that, "If all the junior high school can do is teach English, Algebra and Latin in the ninth grade, why have a junior high school."<sup>1</sup> The query is an especially pinching one if in connection with it we think only of the small school. In the

<sup>1</sup>Fifth Yearbook, Department of Superintendence, 39.



case of the larger ones, room can be seen for at least a half-unit each of two different subjects, either or both of which may be of non-academic character. So we may infer from the fact that the colleges for the most part will accept this class of work to the extent of three units. But that a way out like this does not commend itself favorably is shown by the attitude of school superintendents, eighty-five per cent of whom are seen from the Year-book just referred to as favoring modification of entrance requirements. The same is attested by the further fact that the practical and fine arts do not appear very considerably as constants for the ninth year in representative curricula. Evidence to this effect is outstanding in the fourteen situations reported upon by Glass. Art appears in but four of the fourteen cases, industrial arts in five, and home economics in only three. These subjects, assuredly not college preparatory subjects of the first order, are often needful in the cases of pupils who are being formed out of something else than college material into such material; and freer way accordingly should be made for their use. Such provision can be justified further if we may assume that the junior high school, on its own part, will gird itself for the more meaningful kind of teaching of them which we hitherto have stressed.

A second problem arising from the differing demands of the world and the college as regards subjects to be taught in the ninth grade has to do with kind of mathematics. The higher institutions show a decided preference for algebra. The weight of the argument as regards the form of mathematics that is best adapted to the need of the pubescent masses seems, on the contrary, to favor

the interrelated type of subject matter organization as against subjects taken in serial order. The controlling theory as regards the teaching tends to throw the emphasis upon mathematics as a tool for interpreting social life, with proportionate neglect of discipline as an objective. The principle of interrelation seems entirely valid, on the ground mostly of exploratory and correlative propaedeutic values, and it should prevail. The major thing to be accomplished in the field, however, interrelation or no interrelation, is to bring about actual learning of mathematics and how to use it. Intelligent application of the subject obviously may involve much incidental enlightenment regarding social life; but this latter, it must be remembered, is the incidental and not the main accomplishment to be sought. Mathematics is a tool, and the use of any tool comes primarily by training. Even less here than elsewhere will careless flitting from one thing to another bring educationally worthy results. Interrelation from the standpoint of neither mutual reinforcement nor exploration can justify it. On the contrary, these both demand precisely what training demands, which is intensive treatment of essentials and return to them even more than once for further intensive treatment if necessary.

If the teachers of mathematics in the junior high school will set themselves resolutely to thorough-going classroom work, then the colleges can well afford to yield a portion of their time required to earn an entire entrance unit in the ninth grade, thus making way for one or two more than the traditional four subjects in that grade. There is no necessary sacrifice involved in this, since in the general mathematics course as properly constituted algebra is prominently



represented in three consecutive years instead of being concentrated in one. There is no reason why this arrangement should not result in even better mastery of the fundamentals of the subject, considering the occasion that is offered for advantageous correlations and the application which it represents of the principle of distributive learning. Whatever there may be in the way of quantitative loss can be offset by qualitative gain. There remains then, so far as this subject is concerned, only the need of pointing out the absence of any difficulty, if general mathematics may be allowed to take care of elementary algebra, about certifying, later, more advanced work.

The case of junior high school science is much like that of mathematics in that both are general, and for essentially the same reasons. Whether the ninth grade course may be general science or general biology, it stands in prospect of being held in question when offered for entrance purposes, in some colleges at least, if along with it either physics or chemistry is not offered. In any case, what may be termed another, or rather the original, "all or none principle" is applied; less than a full unit of credit is grudgingly accepted. Thus it comes about, as in the case of mathematics, that if the subject is to be taught at all it must occupy too large a portion of the pupil's year to admit of his being exposed to other types of work that are important for purposes of general culture, an interest for which the colleges are not slow to express their zeal. Science itself does not enjoy a reserved seat among the subjects in this grade in which standing room is always at a premium. The Glass report, for illustration of this fact, shows it as appear-

ing in only three centers out of fourteen, while geography, which obviously in part is scientific in content, appears in none.

In view of the facts as briefly stated, it appears not unreasonable to ask that the stays fastened with constricting effect round this situation, time-honored as they are, shall be loosened in a spirit of experiment if not as a finality. If with good sportmanship this outward matter can find adjustment, then college and junior high school together will do well to look to the truly inward interest of high quality teaching, for in that, here as formerly, "lies the rub." In this regard each has a fairly obvious function. The one must act in the direction of furnishing teachers equipped for better work; the other must begin that better work now, or hurry the improvement if it is already under way.

Those who have been following closely the discussion thus far will have observed that we have been concerning ourselves with those subjects that may be regarded as factors of the core curriculum. Although left until the last, the social studies may be named as belonging prominently in this class. In our use of the term social studies in this connection we would ask to be understood as not having reference to encyclopedic history, geography, and civics, either in parallel or serial order, the last thrown in maybe after only a parenthetical fashion. We are thinking rather of an intelligent correlation of these subjects as material that functions worthily toward solving pressing problems of our social life. The precise content to be embodied in this phase of the curriculum is even less determined as matters now stand than in the case of other experimental courses of similar type. The underlying idea commends



itself, however, as being altogether consistent with the junior high school's distinctive function, and as being in harmony with sound principles of teaching besides. It would seem, therefore, worthy of thorough trial.

There is hopeful prospect as regards organization of a workable course of study in this field. The problem is engaging intense activity among the leaders representing both the secondary schools and the higher institutions, and there appears in it a creditable measure of intelligent cooperation. When it comes to finding, in the ninth grade, place for the social studies that is commensurate with their importance for the purposes of general education, college preparatory education included, the familiar four-unit barrier again is faced. The Glass report comes into service once more with reference to this point. It shows that while the social studies appear in all fourteen of the centers studied in the seventh grade and in eleven as an eighth grade subject, they fall to the fifty per cent mark when the ninth grade is reached. Geography is cut off from all possibility of helping out in the situation by being left out in all cases. To my thinking there appears no reasonable ground for omitting the social studies as a constant in the ninth grade in any school system. In so far as we have agreement to this point of view, we necessarily find occasion for mutual pledges of faith that may afford practical ground for reconstructing the present too narrowly limited four-track passage-way through the grade in question.

In none of the cases appearing thus far among the bones of contention with reference to the general problem under discussion, has any material difficulty arisen regarding designations or legiti-

mate credit values that may be attached to senior high school work in the same field. Nor do they present any suggestion in the direction of giving senior high school credit for work done in the grades below. The languages are different in these respects, besides presenting the further difference that they stand outside of the group constituting the core curriculum. They partake of the nature of constant studies, however, since their presence in the ninth grade at least is demanded in so far as four units of work in the same language are found to be necessary. This constitutes the major problem that arises in connection with the languages, but besides this one there are at least two others. Standing in close alliance and second in order of magnitude is the question of whether work done in the field of languages in the junior high school grades shall be credited in terms of entrance units and if so to what extent. The third difficulty presenting itself has to do with the desirability of attributing to beginning work in a foreign language tenth grade or eleventh grade credit value. Some consideration will have to be given to each of these problems; but fortunately none of them will demand lengthy treatment.

It is manifestly impracticable for the colleges to go into language teaching on the level of the twelfth grade. Equally clear is it that this would be necessary to a considerable extent if the opportunity to begin a worthy career in Latin or any other language earlier than the tenth grade should be cut off. The only alternative, which again is very clear, must be to start language studies in the junior high school, not later than in the last year. Further argument for this may be noted in the value of the languages from the standpoint of general culture,



an interest with which the junior high school necessarily must be concerned. And, there is to be considered, too, the reputed facility with which younger pupils learn the languages. Their presence in the junior high school program of work is amply justified; but giving them a place on the regulation ninth grade basis is impracticable without undue sacrifice of the studies that all should take. The solution of the difficulty that commends itself with the most reason is to confine the work of any given pupil to a single language and lengthen that work downward into, or through, the eighth grade or possibly beyond. This is done somewhat commonly. The space which the foreign language demands in the ninth grade, however, is often provided by complete elimination of some essential in preference to breaking up one or more of the units that will do well for college entrance. The four-unit standard has unduly constraining effect again in a case like this, for liberty really should obtain that will admit of making at least five substantial subjects continuous throughout the year, class work in each coming less frequently than every day.

As regards the matter of giving recognition in the form of entrance unit credit to foreign languages when no such claim is advanced in the case of any other subject, the everlasting why seems quite in point. Nothing comes at all clearly into view to justify it. The suggestion seems to carry the implication that a foreign language in the junior high school is an extra that is to be taken only by those having superior ability as a measure of time. Clearly the subject is no such extraneous affair, while other available means of facilitating the more rapid progress of brighter pupils may with much

greater justification be employed. The demand for this special concession, in so far as it is a demand, seems to bear the aspect of sharp bargaining. In the interest of fair dealing it should be abandoned. If the colleges will accept three units in a given language instead of asking for four, they will be exercising a generosity that is quite sufficient unto the ends that are sought.

Coming to the third of the language problems, it may be observed at once that any increase in the number of pupils beginning the study of languages later than the ninth grade would not necessarily follow from the proposed revision of college entrance requirements. The occasion, accordingly, for added distress regarding attachment of tenth or eleventh grade credit value to beginning work need not be anticipated. Even if the contrary were to be expected, increase of evil would ensue only according to whether beginning language work is of really less educational worth than a subsequent year. There is ground, possibly, for holding that the balance of value is in favor actually of the beginning unit.

We may conclude the subject-matter phase of this discussion by attempting to give something of an over-view of the crucial ninth grade. There are no fewer than ten different subjects that present respectable claims for inclusion within the work of this grade as constant studies. Assuming manual and household arts to be alternatives ordinarily, and the content of geography to be partitionable between science and the social studies, the number is reduced to eight. Of these eight, art, physical education, manual and household arts, and music may be considered as of somewhat accessory nature, at least so far as the



time and credit factors are concerned, leaving four to constitute the bone and sinew of the year. These four are English, mathematics, science and the social studies, all of which should be continuous throughout the year. If, however, each of the four must occupy an extent of time justifying a college entrance unit of credit, then most of the minor subjects mentioned a moment ago, or all of them, must be crowded off the boards. And, still more certainly is it true that no place is left for special college entrance work like a foreign language or other specializing courses having vocational significance. If it comes to omitting in the interest of specialization one or more of the basic four that have been named, then disregard would have to be shown for some of the weightiest considerations pertaining to the period of education in question. The only rational procedure in the situation necessitates breaking away from the entrance unit standard of subject-matter organization. There is no special demand for this, however, coming from those centers where junior high schools do not exist.

In summary of the discussion that has been presented, the following points may be set down:

1. There is no crisis impending with reference to the junior high school; but a situation exists, brought on fundamentally by the general reorganization of education in America, that involves apparently unnecessary restrictions upon an institution representing a very promising phase of the general process of reconstruction.

2. Preparation for college must be recognized as a function of the junior

high school, although not a proximate one.

3. The demands of the college and of the social world show conflict as regards subjects to be taught in the secondary school; but they are in fundamental agreement with respect to the worth, for the purposes of either, of a training that depends especially upon thorough teaching, and that is best characterized as ability to do sound thinking. This point of agreement, fully considered, tends to throw into the background, somewhat, the point of difference.

4. There is no conflict between the ideal of thoroughness and the exploratory principle; the latter, rightly conceived, implies the former.

5. The evil consequences of conflict as regards subjects to be taught center in the ninth grade.

6. The four-unit standard applied to this grade jeopardizes in one way or another nearly all of the subjects that belong in the core curriculum.

7. The same standard renders impracticable the introduction of specializing courses specifically for college entrance purposes or suggested by vocational considerations without undue sacrifice of the necessary common integrating education.

8. There is no occasion, in view of the lack of demand coming from those centers operating upon the conventional plan of grade organization, for total abandonment of the fifteen unit basis of college entrance; the rational proposal is simply such a measure of modification as will insure to the junior high school sufficient liberty of action to carry on well among its other worthy works that of finding those who may be made fit for college.



# Report of Special Committee on Restatement of College Entrance Requirements

BY A. A. REED, CHAIRMAN, LINCOLN, NEBRASKA

Every year since 1921, the North Central Association of Colleges and Secondary Schools has taken some action looking toward basing college entrance requirements upon the work of the senior high school (see North Central Association Quarterly Bulletin, No. 3, pp. 327-333.) In 1923 and again in 1926 the Association asked the colleges included within the North Central territory to revise their terms of admission so as to permit students to qualify for entrance on the basis of eleven or twelve units of work accomplished in the tenth, eleventh and twelfth grades.

In 1926 the Association authorized the Secretary to bring to the attention of the higher institutions a recommendation that they re-state their entrance requirements in terms of the senior high school. A special committee was authorized to report to the next meeting of the Association a workable plan for the restatement of entrance requirements in terms of the senior high school, for different type of liberal arts colleges, technical schools and professional schools.

The President appointed a committee consisting of Dr. C. H. Judd, University of Chicago; Registrar Ira M. Smith, University of Michigan; Principal H. H. Ryan, formerly Ben. Blewett High School, St. Louis, now of the University of Michigan High School; Principal Merle Prunty, Tulsa High School; and A. A. Reed, University Examiner, University of Nebraska, Chairman. The

committee sent a questionnaire to all higher institutions accredited by the North Central Association of Colleges and Secondary Schools, including a statement of six principles in accordance with which the committee was considering the formulation of a report, and asking for an analysis of their entrance requirements in terms of English, foreign languages, mathematics, natural sciences, social sciences, and non-academic subjects, with provisions for indicating the details of each grouping. A summary of replies follows.

Table I. Arts and Sciences, Teachers,  
Junior

Eng.	Lang.	Math.	N. Sc.	S. Sc.	T.
2-3	2	2-3	1	1	40
2-3	2	2-3	1	0	10
2-3	2-3	2-3	0	0	21
2-3	2-3	2-3	0	1	3
2-3	0	2-3	1	1	17
2-3	0	2-3	0	1	4
2-3	2	2-3	1	2	6
2-3	2	2-3	2	2	6
2-3	2	2-3	2	1	3
2-3	0	2-3	2	2	3
2-3	4	2-3	1	1	2
2-3	0	2-3	2	0	1
2-3	0	2-3	0	0	1
2	3	2	1	1	1
3	2	2	0	0	1
English each year					10
Language each year					5
Mathematics more than 2 units					7
Natural Science—Physics 2, Chemistry 2,					
Physical Science 2, Botany 2, Biology or Botany 2, Zoology 1.					
Social Sciences—Am. Hist. 9, Civics 3, Civics or Am. Hist. 12, European Hist. 4, Am. or Eu. Hist. 4, Civ., Am. Hist., Eu. Hist., and Ec. 1.					



This table reads: 40 colleges of Arts and Sciences, Teachers, or Junior type require 2 to 3 units of English, 2 units of foreign language, 2 to 3 units of mathematics, 1 unit of natural science, and 1 unit of social science. Some are on the three-year basis and some on the four-year basis. Ten require English each year, either for 3 years or for 4 years.

Table 2. Fine Arts

Eng.	Lang.	Math.	N. Sc.	S. Sc.	T.
2-3	2-3	2-3	0	0	1
3	2	2	0	1	2
2	2	1	0	1	1
2	0	2	0	1	1
3	0	2	0	0	1
3	2	2	1	$\frac{1}{2}$ C- $\frac{1}{2}$ AH	1

Table 3. Business Administration

Eng.	Lang.	Math.	N. Sc.	S. Sc.	T.
2	0	2	1P	0	1
2	2	2	1	1	1
2	2	2	1	2	1
2	0	2	1C	0	1
2	2	2	1	0	1
2-3	0	2-3	0	0	1

Table 4. Agriculture

2-3	0	2	1P	0	1
2-3	0	2	1	1	2
2-3	0	2-3	0	0	3
2-3	2	2	0	0	1
2	2	2	0	2	1
2-3	1	2	2	1	1
3	0	$2\frac{1}{2}$	4	$1\frac{1}{2}$	1

Table 5. Home Economics

2	0	2	1P	0	1
2-3	0	2-3	0	0	1

Table 6. Engineering

2-3	0	3	1	1	3
2-3	2	3	0	1	3
2-3	0	3	0	0	3
2-3	0	3	2PS	0	1
2-3	2	3	1	1	2
2-3	2	3	2PS	1	1
2-3	2	3	1B-1P	1	1
2-3	0	3	1P	0	1
2-3	2	3	1P	0	1
2-3	2	3	1P	1	1
2-3	2	$3\frac{1}{2}$	1C	1	1

3	0	$2\frac{1}{2}$	0	0	1
3	2	3	3	2	1
3	0	3	$3\frac{1}{2}$	$1\frac{1}{2}$	1
3	0	$2\frac{1}{2}$	4	$1\frac{1}{2}$	1

English each year 9, Civics and Am. Hist. 1, Civics or Am. Hist. 1, History 3.

Table 7. Pharmacy

2	1	2	1	1	1
3	1	2	1P	0	1
2	2	2	1P	1	1
3	2	2	0	0	1
2-3	2-3	2-3	2PS	0	1
3	2	2	2	2	1

Table 8. Law

3	2L	2	0	0	1
2	2L	2	2	0	1

Table 9. Mines

2	0	3	0	0	1
---	---	---	---	---	---

Table 10. School of Nursing

3	2	2	1	0	1
2-3	2-3	2-3	0	0	1

Table 11. Physical Education

3	0	2	0	0	1
---	---	---	---	---	---

Table 12. Veterinary Medicine

2	0	2	1P	0	1
---	---	---	----	---	---

Table 13. General Science

3	0	2	1	$\frac{1}{2}$ C- $\frac{1}{2}$ AH	1
---	---	---	---	-----------------------------------	---

Table 14. Dentistry

3	2	2	1	0	1
2	2L	2	2	0	1

One hundred seventy-one replies were received from the two hundred fifty-four member institutions,—one hundred nine from the one hundred sixty-three four-year institutions, thirty-one from the fifty-four teacher training institutions and seventeen from the thirty-four junior colleges. Fourteen of these reports could not be adapted to a reasonable scheme of classification. The remaining one hundred fifty-seven replies were classified on the basis of common elements by the type of institution. In order to reduce the number of classes,



English and mathematics were in some instances placed under groups of two or three units, with comments to call attention to certain tendencies. Institutions reporting on the basis of twelve units were included with those reporting on fifteen or sixteen units, with explanatory comments.

It must be clearly understood that the function of this committee is to find some practicable way of making such a statement of entrance requirements in terms of the senior high school as will be most widely applicable to all types of institutions, with the highest possible benefit to all. The committee is not concerned with securing from the colleges the adoption or approval of the twelve unit basis or any other detail of college entrance. Its purpose is merely to secure such information as is basic to a plan of proper articulation. Accordingly no attempt has been made to secure the approval of any plan. The committee of the Commission on Institutions of Higher Education, headed by President C. H. Rammelkamp, of Illinois College, in securing an expression from so many institutions of the Association favorable to the adoption of a plan of admission from senior high schools on the basis of twelve units has made a splendid contribution to the movement for securing the proper articulation of the work of the senior high school and the college.

Our committee recognizes the right of any college to prescribe for entrance any secondary school work that may be essential to the pursuance of courses in such institution. In the light of this principle, we have endeavored to analyze the summaries tabulated under Tables 1 to 14, and on the basis of this analysis to arrive at some scheme of coherent articulation. Accordingly, catalogs of

institutions were studied on a broad plan of chance selection for general features and of specific inquiry for particular features, in order to determine the degree to which the institutions actually make prescribed high school courses prerequisite to freshman college courses.

In the case of English, no college prescribes fewer than two units from senior high schools or three units from four-year high schools, while ten colleges prescribe three units from three-year high schools and four units from four-year high schools. An examination of the catalogs shows that only in a few instances is there any relation between the number of units prescribed for entrance and the class in English which the freshman enters. Where a classification of freshman English is made, it is generally upon the basis of an examination rather than because of the amount of English carried in the high school.

All but twenty-six colleges in Table 1 prescribed from two to four units of foreign language, a few specifying Latin and a few French. In most cases, there seems to be proper sequential relations between the language prescribed for entrance and the organization of the language course in the college, and yet provision is usually made for allowing a student to meet degree requirements by beginning a different language in college from the one carried in the high school.

In the case of mathematics there is good articulation between the units prescribed for entrance and the work of the college course. This is especially true in engineering. In colleges of liberal arts, however, it is quite common to find in the same beginning college class in algebra students who have had one unit and those with one and one-half units of algebra in high school.



Freshmen and sophomores are generally admitted to college courses in the natural sciences without regard to the specific sciences presented for entrance. The only exception seems to be found occasionally in physics and chemistry. In a few institutions, those who carried these subjects in the high school enter a college course that presupposes a year of study. In some instances, the amount of college credit is affected by the high school course. Thus, in one college a student with a year of high school chemistry enters a six-hour college course, while those without high school chemistry carry a ten-hour college course, receiving but six hours of college credit. The prescription of a laboratory science as a training in the technique of the laboratory is probably justified if identical methods are used in both secondary and higher institutions, but it would seem difficult to justify the requirement on any other ground, in view of the lack of relation between the high school courses and the college courses.

In the field of the social sciences there seems to be no connection between the high school course and the college course. Ninety-three institutions prescribe units in the social sciences, many of them specifying two units, some indicating the exact subject to be offered. The majority of higher institutions use general terms that permit of a choice in this field. Where specific requirements are made, the college course can no doubt be organized so as to build upon the designated unit. However, the relation of a general prescription to the college course is not evident.

The committee studied the entrance requirements of the different types of institutions to see what sequential relation there might be between the entrance

requirements of the colleges due to types of institutions. If there is a consistent relation between prescribed high school courses and the college course, this should appear distinctly in a school of fine arts (Table 2). Yet only two of the six schools reporting can be classified under the same general grouping, and no two have the same exact requirements within a classification.

No two of the six colleges of business administration (Table 3) can be classified under the same general grouping. None of them prescribes three or four units of English. Half of them prescribe a foreign language. All but one prescribe natural science, one requiring chemistry and another physics. Only two prescribe the social sciences, one of these designating two units in this field. This is an institution of a new type and it is probable that as yet exact information is not available to show what is essential and what is not.

Engineering has a long period of experience and offers a sequential type of curriculum. Yet it is necessary to use fifteen classes for grouping the twenty-two colleges (Table 6). Mathematics is the only requirement that is uniformly consistent. Even in this subject, there are two institutions that vary the amount prescribed. It appears, however, that at least one of the institutions which prescribe but two and one-half units of mathematics admits to the same college class students with two and one-half units and those with three units. Ten of these Colleges require a foreign language, while twelve do not. Five require physics, three chemistry, and one botany, while seven merely specify a natural science. This college is old enough to have reached more nearly uniform entrance requirements if the



institutions had applied to the subject of admission the same scientific spirit which characterizes their college work.

A study of the other table submitted shows the same lack of sequential relation in other colleges which is found in those to which reference has been made.

In accordance with the above facts, your committee makes the following recommendations:

I. Recognizing that there is need of an immediate means of adjustment during the transitional period, as an alternative plan of admission to the present plan of admission from a four-year high school, your committee recommends that the colleges and universities of the North Central Association accept twelve units completed in the senior high schools, provided that the subjects taken in the senior high schools, together with the work done in the junior high schools, satisfy the subject requirements for the particular college or university. This action is not intended to make restrictions on the junior high schools, and does not require detailed reports from the junior high school in subject matter below the tenth grade.

II. As a plan for the re-statement of entrance requirements in terms of the senior high school for different types of liberal arts colleges, technical schools and professional schools, the following principles are recommended:

1. Full admission to be based upon eleven or twelve units completed in grades X, XI, and XII. Where state laws or regulations of standardizing agencies prescribe fifteen units, a college may accept three units from the junior high school properly certified by a senior high school without details.

2. Of the eleven or twelve units accepted for admission, not to exceed three

to be non-academic. The academic units to consist of a major (three units) and two minors (two units each), or of four minors.

3. English to be either a major or a minor, each college to specify the other elements of the major and minors, leaving the other units optional within the limits provided for academic and non-academic units.

4. Academic units to be defined as English, foreign languages, mathematics, natural sciences, and social sciences.

5. A major in foreign languages may consist of a year of one language and two years of another, but a minor must be a single language.

6. A unit of foreign language and a unit of mathematics may be accepted from work carried below grade X as a part of a major or a minor, in such instances the total credits earned in grades X to XII not to be fewer than 11 units. In reporting these credits, it shall not be necessary to certify a grade for the work carried below grade X, the completion of the higher unit being sufficient to validate the credit for the work carried below grade X.

We believe that the six principles enunciated above will permit colleges to make more definite prescriptions in the fields upon which they can actually build sequential courses with a reasonable hope that adequate preparation will be made for these courses by the high schools. They will enable the high schools to adapt their curricula to group purposes or to individual differences of pupils, to teaching facilities available, and to local needs. The high schools may then do more within the fields where they can do their best work.

As a result of this organization better preparation will follow on the part



of those who seek admission to college. This plan simplifies college entrance. It reserves to the college the right and the duty of prescribing all essential subjects which actually function in articulating the high school and the college. It places upon the high school the responsibility for organizing its program of studies in reasonable sequential curricula, consistent with the needs and the ability of each individual school. In all subjects not actually essential to articulating the high school and the college, it leaves to the high school those problems of educational guidance which can best be exercised by those who know the students personally and so can give consideration to the element of individual differences.

III. We recommend that all colleges of this Association study anew their entrance requirements for schools of the four-year type in the light of this investigation, with the view to securing greater uniformity among institutions of the same type as well as those of different types, as far as may be consistent with permitting each institution to serve its own special needs.

IV. We recommend that the secondary schools of this Association be urged to prepare within the next two years a carefully organized senior high school program, on the basis of which colleges can rely in the organization of their entrance requirements.

V. We recommend that the committee be continued for the purpose of studying the progress of the movement for securing the results for which it was created, to report to the Association in 1929.

Every fair-minded student of the history of secondary education must recognize the fact that the high schools owe

an inestimable debt of gratitude to the colleges for leadership and guidance. But for this aid, the marvelous development of the American high school would have been impossible. At one time, it was most helpful to the high schools that the colleges made definite prescription in order that students could have the necessary prerequisite for the college course. The relations between the secondary school and the college were in most courses sequential. With the spread of the college curriculum, such relationship is now becoming less possible in all courses and impossible in most of them. Moreover, until recently the secondary field did not have a leadership properly prepared to assume the weighty responsibility involved in the organization of curricula that affect so vitally the life of the college. All this is now changed. By the creation of a body of scientifically prepared administrators of secondary education, due to the splendid work of our colleges, through the influence of such organizations as the North Central Association of Colleges and Secondary Schools, where leaders in both fields work together upon all common problems, it is now safe to call more upon the secondary schools for aid in solving this problem which depends for its success upon the establishment of well-balanced curricula which will serve the purpose of graduation from the high school and which, at the same time, will have due relation to the essential needs of the colleges in articulating the work of the college and the high school.

Respectfully submitted,

(Signed)

C. H. Judd,  
Ira M. Smith,  
H. H. Ryan,  
Merle Prunty,  
A. A. Reed, Chairman.

Editor's Note: The above report, together with the recommendations included, was unanimously adopted by the Association at its meeting in March, 1927.



### Supplemental Report

Section I above was adopted by the committee of the Association as a transitional step essential to putting into operation a change from existing requirements to those proposed in Section II. Beginning with "as an alternative plan" it is the amended report prepared by the committee of the Commission on Institutions of Higher Education. On learning that the Commission had directed President Rammelkamp to move the substitution of this report for the one to be presented by the committee of the Association, this section was omitted from the report in order to leave the committee of the Commission free to take any action that might seem desirable after

hearing the report of the committee of the Association. After the presentation and discussion of both reports, the Association authorized the appointment of a committee consisting of the chairman of each committee and one other member to recommend on the following day such harmonizing of the two reports as might seem possible to this committee. President Elliff appointed Prin. J. L. Shouse, Westport High School, Kansas City, Mo., as the third member. The committee unanimously recommended the adoption of the original report of the committee of the Association containing Section I restored, which recommendation was unanimously adopted by the Association.



# The Discovery and the Treatment of Individual Differences in Junior High School Pupils

THOMAS W. GOSLING, MADISON, WISCONSIN

*(A Committee Report)*

In most statements of objectives for the junior high school the recognition and the treatment of the individual differences of pupils occupy a leading place. In fact it may well be doubted whether a school is really entitled to the name of junior high school if it does not give concentrated attention to this important objective.

For the purpose of discovering how well the schools which are classified as junior high schools in North Central territory are meeting their obligation in this one particular, your Committee sent out the following questionnaire:

## JUNIOR HIGH SCHOOL REPORT 1926-1927

### North Central Association of Colleges and Secondary Schools

To the Principal of the Junior High School and the Superintendent of Schools:

At its meeting in March, 1926, the North Central Association of Colleges and Secondary Schools received the report of its Junior High School Committee on Foreign Languages in Junior High Schools, and approved the recommendations of the Committee as follows:

"1. That the committee on junior high schools be continued with instructions to observe and to report upon other aspects of the junior high school problem.

"2. That the Commission on Sec-

dary Schools request the Association to repeat its urgent invitation to the colleges included within the North Central territory to revise their terms of admission in such manner as to permit students to qualify for entrance on the basis of units of work—eleven or twelve in number—accomplished in the tenth, eleventh, and twelfth grades of the Secondary School."

For the report to be made in March, 1927, the Committee wishes to gather data on the provisions which are made in junior high schools in North Central territory for meeting the individual differences of pupils. Making provision for individual differences has been regarded as one of the major objectives of the junior high schools. For this reason the information which the Committee hopes to assemble ought to be of great value to all junior high school teachers and administrators.

For the report which was submitted in March, 1926, material was contributed by three hundred and thirty-seven (337) schools. The names of these schools were published in Volume I, Number I, of the North Central Quarterly, pages 130 to 136. We hope that a larger number of schools will contribute information for our forthcoming report. To this end we ask your cooperation by filling out this blank promptly and by sending it to the Chairman of the North Central Committee for your state on or before January 1, 1927.



**North Central Committee on Junior  
High Schools**

- Thomas W. Gosling, Superintendent of  
Schools, Madison, Wisconsin (Chair-  
man).  
J. B. Edmonson, University of Michigan,  
Ann Arbor, Michigan.  
T. M. Deam, Principal of High School,  
Joliet, Illinois.  
A. A. Reed, University of Nebraska,  
Lincoln, Nebraska.  
H. H. Ryan, Principal of University  
High School, Ann Arbor, Michigan.  
L. V. Koos, University of Minnesota,  
Minneapolis, Minnesota.  
E. E. Morley, Principal of High School,  
Cleveland Heights, Ohio.  
F. P. Whitney, Assistant Superintendent  
of Schools, Cleveland, Ohio.

**Junior High School Report Blank**

(This blank must be returned on or be-  
fore January 1, 1927, to the Chairman of  
the North Central Committee for your  
state.)

**SECTION I**

Name of school-----  
City or town-----State-----  
Name of superintendent-----

Name of principal-----  
Population -----  
Grades included in your junior high  
school -----

**Junior High School Enrollment on  
October 1, 1926**

7th grade	8th grade	9th grade	Total

Total enrollment on October 1, 1925,  
for whole school system-----  
Number of pupils promoted to the 10th  
grade within the last year-----  
Number of weeks in school year-----

**SECTION II**

A. How do you determine the indi-  
vidual differences of the pupils in your  
schools? (Describe in detail.)

B. How does your school solve or at-  
tempt to solve the problems arising out  
of the individual differences of its pu-  
pils? (This report should be as com-  
plete and detailed as you can make it.  
Any printed or mimeographed material  
that you may have will be valuable to the  
Committee.)



## NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS

## Investigation of the Provisions Made by Junior High Schools for Meeting the Individual Differences of Pupils

STATISTICAL REPORT MADE IN MARCH, 1927

## CONTENTS:

- Table I. Enrollments, Promotions, Length of School Year.*
- Table II. Type of Organization.*
- Table III. J. H. S. Enrollments Compared With the Total Enrollments for the Whole System.*
- Table IV. Promotions to 10th Grade.*
- Table Va. Ways Individual Differences Are Determined.*
- Table Vb. Tests Used to Determine Individual Differences.*
- Table VI. Solutions to the Problems Arising Out of Individual Differences.*
- Table VII. Schools That Supplied Information for the North Central Association Junior High School Report for 1926-1927.*



## I. Enrollments, Promotions, Length of School Year

State	Number of Cities Reporting	Number of Schools	Enrollment by Grades			Enrollment for Whole <sup>7</sup> System—1925	Promoted to 10th Grade Last Year	Weeks in School Year				
			7th	8th	9th			36	37	38	39	40
Arizona	4	4	191	191	150	532	181	2	...	2	...	...
Arkansas	15	17	2,828	2,396	2,115	7,339	1,709	15	2	...	...	...
Colorado	8	12	2,158	2,160	1,895	6,213	1,323	6	1	5	...	...
Illinois	10	13	2,811	2,833	2,015	7,659	39,264	2	1	2	...	8
Indiana	18	22	3,591	3,642	3,298	10,531	61,114	18	...	2	...	2
Iowa	15	23	3,649	3,833	4,159	11,641	71,564	9	...	10	...	4
Michigan	35	47	12,246	11,245	9,914	133,794	307,356	...	...	13	4	829
Minnesota	28	47	8,293	8,562	9,654	226,554	162,048	18	...	28	1	...
Missouri	6	8	768	684	686	2,138	10,438	8	...	...	...	...
Montana	10	10	546	572	139	1,257	6,523	7	...	3	...	...
Nebraska	15	18	1,922	2,086	2,426	86,448	24,616	18	...	...	...	...
North Dakota	4	4	579	482	481	1,542	7,434	355	...	...	...	...
Ohio	35	1064	14,845	12,952	12,945	440,815	350,240	16	...	32	2	913
Oklahoma	1	2	368	406	429	1,203	4,679	322	2	...	...	...
South Dakota	4	4	575	564	688	1,827	7,858	613	2	1	...	...
West Virginia	50	62	4,271	3,382	2,972	10,625	37,524	2,050	62	...	...	...
Wisconsin	29	42	5,703	5,045	5,580	16,328	77,817	3,838	12	2	17	10
Wyoming	11	11	628	819	106	51,608	13,085	87	...	3	...	...
Total	298	410	65,972	61,854	59,652	618,054	1,289,329	45,268	208	7	119	8
Per Cent			[35.1	32.9	31.8	100.0]		[50.7	1.7	28.8	1.9	16.1]
Corresponding												

Figures for { 1926 254 337 } 1923-'24 Total J. H. S. Enrollments: 112,828 }  
 { 1925 133 233 }  
 1167,553 {  
 12129,917 {

<sup>1</sup>Includes 389 in special class and 6th grade

<sup>2</sup>Includes 45 in special class

<sup>3</sup>Includes 14 in special class

<sup>4</sup>Includes 73 in 6th grade

<sup>5</sup>Includes 55 in 6th grade

<sup>6</sup>Includes 576 in 6th grade and special class

<sup>7</sup>Includes continuation schools, junior colleges and colored schools in some instances

<sup>8</sup>One school reports 52 week school year

<sup>9</sup>One school fails to report length of school year

<sup>10</sup>One school fails to report enrollment numbers

<sup>11</sup> and <sup>12</sup>Include 1452 and 731 not given by grades

<sup>13</sup>Approximate figure



### III. Junior High School Enrollments for Schools Which Give Total Enrollments for the Whole System

Number of Schools Reporting System Enrollments	J. H. S. Enrollments for Such Schools	Enrollments for Whole Systems	Per Cent That J. H. S. Enrollments Are of System Enrollments
4	532	4,296	12.4
15	5,853	27,221	21.4
11	5,950	76,252	7.8
13	7,659	39,264	19.5
21	10,188	61,114	16.7
23	11,641	71,564	16.3
44	32,202	307,356	10.5
44	25,235	162,048	15.6
8	2,138	10,438	20.4
10	1,257	6,523	19.2
18	6,448	24,616	26.5
4	1,542	7,434	20.8
52	33,963	350,240	9.7
2	1,203	4,679	25.7
4	1,827	7,858	23.2
30	7,475	37,524	19.9
36	14,389	77,817	18.5
11	1,608	13,085	12.3
350	171,110	1,289,329	13.3

### II. Type of Organization

State	Total Number of Schools	Number of Schools Having Grades				
		7, 8, 9	7 and 8	8 and 9	8th only	Others
Arizona	4	2	1	....	1	....
Arkansas	17	16	1	....	....	....
Colorado	12	11	1	....	....	....
Illinois	13	7	5	....	1	....
Indiana	22	20	1	1	....	....
Iowa	23	21	....	2	....	....
Michigan	47	37	7	1	....	2
Minnesota	47	46	....	1	....	....
Missouri	8	7	1	....	....	....
Montana	10	4	5	....	1	....
Nebraska	18	16	....	1	....	1
North Dakota	4	3	1	....	....	....
Ohio	64	52	5	1	1	5 <sup>1</sup>
Oklahoma	2	2	....	....	....	....
South Dakota	4	4	....	....	....	....
West Virginia	62	60	1	1	....	....
Wisconsin	42	37	5	....	....	....
Wyoming	11	2	6	....	1	2
Total	410	347	40	8	5	10 <sup>2</sup>
Percent of Total Schools	100.	84.6	9.8	2.0	1.2	2.4

<sup>1</sup>One school not reporting.

<sup>2</sup>Three schools with 6th, 7th, and 8th grades; three with 9th grade only; two with 6th, 7th, 8th, and 9th grades; one with 7th grade only.



## IV. Number of Pupils Promoted to the 10th Grade

State	Total Number of Schools	Number of Schools Reporting Promotions to 10th Grade	Enrollments of Schools Promoting to 10th Grade		Number Promoted	Per Cent That Number Promoted is of	
			9th Grade	Total		9th Grade Enrollments	Total J. H. S. Enrollments
Arizona .....	4	2	150	450	181	120.5	40.2
Arkansas .....	17	16	2,115	7,079	1,709	80.7	24.1
Colorado .....	12	10	1,731	5,181	1,323	76.4	25.6
Illinois .....	13	7	2,015	4,719	1,698	84.4	36.0
Indiana .....	22	22	3,298	10,531	2,839	86.1	26.9
Iowa .....	23	23	4,159	11,641	3,506	84.3	30.1
Michigan .....	47	37	9,320	29,827	7,320	78.5	24.5
Minnesota .....	47	40	8,652	23,153	7,055	81.5	30.5
Missouri .....	8	8	686	2,138	681	99.2	31.9
Montana .....	10	4	139	375	87	62.5	23.2
Nebraska .....	18	16	2,073	5,560	1,973	95.2	35.5
North Dakota .....	4	3	481	1,408	355	73.9	25.2
Ohio .....	64	47	11,298	32,830	9,631	85.2	29.3
Oklahoma .....	2	2	429	1,203	322	75.2	26.8
South Dakota .....	4	4	688	1,827	613	89.1	33.6
West Virginia .....	62	58	2,928	10,185	2,050	70.0	20.1
Wisconsin .....	42	33	4,298	12,383	3,838	89.3	31.0
Wyoming .....	11	2	106	367	87	82.1	23.7
Total .....	410	334	54,566	160,857	45,268	83.0	28.2



## Va. Ways by Which Junior High Schools Determine Individual Differences

	Arizona	Arkansas	Colorado	Illinois	Indiana	Iowa	Michigan	Minnesota	Missouri	Montana	Nebraska	North Dakota	Ohio	Oklahoma	South Dakota	West Virginia	Wisconsin	Wyoming	Total	% of Total No. of Schools
Number of Schools.....	4	17	12	13	22	23	47	47	8	10	18	4	64	2	4	62	42	11	410	100.0
Number not replying.....	—	—	—	1	1	—	—	—	1	—	1	—	1	—	—	1	—	—	6	1.5
Nothing done.....	—	—	—	1	—	—	1	—	—	—	—	—	1	—	—	—	—	—	4	1.0
1. Intelligence tests.....	3	16	11	7	18	18	33	40	5	7	16	2	42	—	4	34	31	9	296	72.2
2. Achievement tests (standard).....	1	7	6	4	11	7	15	22	2	9	7	2	22	—	3	14	16	8	156	38.0
3. Aptitude tests.....	—	—	1	—	—	—	2	2	—	—	—	—	—	—	—	—	1	—	6	1.5
4. Regular teachers' tests.....	—	—	—	—	—	2	2	3	—	3	1	—	1	—	—	4	2	1	19	4.6
5. Teachers' judgment.....	3	11	7	7	14	7	26	18	4	6	8	2	28	—	3	17	18	3	182	44.4
6. School record.....	2	12	8	8	7	12	22	20	2	3	11	4	26	—	—	27	23	5	192	46.8
7. Personal characteristics of pupils observed.....	—	—	2	—	1	—	4	1	—	—	4	—	8	—	—	10	9	2	41	10.0
8. Home conditions studied.....	1	1	—	2	4	—	3	9	—	—	4	—	4	—	—	8	2	1	39	9.5
9. Personal conferences with parent or pupil.....	1	2	1	2	2	1	3	4	—	—	2	—	6	—	—	7	—	—	31	7.6
10. Physical, Medical or Dental Examination.....	1	2	—	1	2	1	5	5	—	—	1	—	4	—	—	5	2	2	31	7.6
11. Miscellaneous <sup>1</sup> .....	—	1	—	1	3	1	2	5	—	—	—	—	4	—	—	1	2	1	21	5.1
Total.....	12	52	36	32	62	49	117	129	13	28	54	10	145	—	10	127	106	32	1,014	24.7
Average per school.....	3.0	3.0	3.0	2.4	2.8	2.1	2.5	2.7	1.6	2.8	3.0	2.5	2.3	—	2.5	2.0	2.5	2.9	2.47	.....

<sup>1</sup>Contests, case-study of individual, vocational self-analysis, complete file for each pupil, vocabulary test, heredity, individual graph of achievement scores, attendance record.



## Vb. Frequency list of the Standard Tests Mentioned as Being Used to Determine Individual Differences

## ACHIEVEMENT TESTS

Stanford .....	31
Thorndike-McCall Reading .....	6
Compass Diagnostic .....	3
Branom Geography .....	2
Detroit Word Recognition .....	2
Lippincott Spelling .....	2
Briggs English Form .....	1
Buchanan Arithmetic .....	1
Denver Arithmetic .....	1
Monroe Reading .....	1
N. Y. English Survey .....	1
Posey-Van Wagenen Geog. Information .....	1
Posey-Van Wagenen Geog. Thought .....	1
Stevenson-Arithmetic .....	1
Stevenson-Reading .....	1
Stone Reasoning .....	1
Stone Language Usage .....	1
Van Wagenen Spelling .....	1
Van Wagenen History .....	1
Van Wagenen History Thought .....	1
Wilson Language .....	1
Woody-McCall Arithmetic .....	1
Woody-Van Wagenen Arithmetic .....	1
— .....	63

## INTELLIGENCE TESTS

Terman .....	61
Otis Classification .....	33
National Classification .....	21
Illinois General .....	14
Haggerty .....	8
Binet .....	7
McCall's Multi-Mental .....	4
Cleveland Classification .....	3
Army Alpha .....	2
Detroit 1st Grade .....	2
Pintner-Cunningham Primary .....	2
Kuhlmann .....	1
Miller .....	1
— .....	159

## MECHANICAL APTITUDE TESTS

Stenquist .....	2
Unspecified .....	4
— .....	6

## VOCABULARY TESTS

Ingليس .....	1
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VI. Frequency Table of the Ways Junior High Schools Attempt to Solve the Problems Arising Out of the Individual Differences of Their Pupils

	Arizona	Arkansas	Colorado	Illinois	Indiana	Iowa	Michigan	Minnesota	Missouri	Montana	Nebraska	North Dakota	Ohio	Oklahoma	South Dakota	West Virginia	Wisconsin	Wyoming	Total	% of Total
Number of schools reporting.....	4	17	12	13	22	23	47	47	8	10	18	4	64	2	4	62	42	11	410	100.0
No reply to question .....	.....	.....	.....	1	1	.....	3	1	1	.....	1	.....	2	.....	.....	3	.....	1	14	3.4
Little or nothing being done.....	2	6	.....	.....	2	4	6	3	4	.....	2	.....	6	.....	.....	10	.....	2	47	11.4
1. Medical or physical care .....	.....	.....	.....	.....	.....	4	4	2	.....	.....	.....	.....	5	..... <sup>2</sup>	1	.....	.....	.....	12	2.9
2. Sex segregation .....	.....	1	.....	.....	1	1	1	.....	.....	.....	.....	.....	3	.....	.....	.....	1	.....	8	2.0
3. Homogeneous grouping on basis of mental ability—of a somewhat official and permanent character <sup>1</sup> .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4 <sup>1</sup> Ungraded section for misfits, low I. Q. etc.....	1	10	10	7	15	14	30	29	4	6	10	2	43	.....	4	20	28	6	239	58.2
5. Teachers more or less consciously divide classes into temporary or "unofficial" groups.....	.....	.....	1	1	2	3	5	9	.....	.....	1	1	6	.....	.....	.....	6	.....	35	8.5
6. Content of subject matter adapted to the homogeneous groups—a group solution.....	1	1	.....	.....	.....	1	.....	1	.....	1	1	.....	3	.....	.....	.....	1	.....	10	2.4
7. Differentiated assignments or "contract system" in its various forms—largely an individual solution .....	.....	2	3	4	12	9	11	11	.....	2	6	1	22	.....	1	6	19	1	110	26.8
8. Better pupils assigned extra work or "optional exercises" from time to time.....	1	1	1	1	2	3	2	6	1	3	4	1	7	.....	1	4	21	1	60	14.6
9. Project method .....	2	.....	2	1	4	3	1	3	.....	1	.....	.....	2	.....	.....	12	3	.....	34	8.3
.....	.....	.....	1	3	1	.....	1	5	.....	1	2	.....	1	.....	.....	1	6	.....	22	5.4

<sup>1</sup>Provision made for reclassification reported by 33 schools.<sup>2</sup>See Journal of Educational Research, Dec. 1925, "A Plan of Classifying Pupils" by E. D. Price.



VI. (Continued) Frequency Table of the Ways Junior High Schools Attempt to Solve the Problems Arising Out of the Individual Differences of Their Pupils

	Arizona	Arkansas	Colorado	Illinois	Indiana	Iowa	Michigan	Minnesota	Missouri	Montana	Nebraska	North Dakota	Ohio	Oklahoma	South Dakota	West Virginia	Wisconsin	Wyoming	Total	% of Total
10. Try-out or finding courses, etc.....	1	1	...	...	1	...	11	6	...	...	1	...	4	...	...	4	...	...	29	7.1
11. Electives offered .....	...	3	2	3	5	5	12	8	2	3	7	1	8	...	2	6	5	1	73	17.8
12. Definite courses offered, as academic, commercial or industrial course .....	...	...	...	1	3	1	4	4	...	...	2	3	9	...	1	7	...	1	36	8.8
13. Individual arrangement of pupil's program or schedule .....	1	3	3	1	1	2	4	10	...	1	1	1	9	...	...	5	4	...	46	11.2
14. Educational or vocational guidance .....	1	3	4	1	3	1	10	5	...	1	3	...	8	...	...	5	2	1	48	11.7
15. Supervised study .....	...	...	2	1	2	4	4	6	...	2	1	1	5	...	...	9	1	1	39	9.5
16. Remedial classes .....	...	...	1	2	1	...	6	5	...	...	...	2	...	...	...	1	5	...	23	5.6
17. Special coaching by individual appointment .....	...	2	1	2	1	2	2	3	1	2	1	1	3	...	...	11	5	1	38	9.3
18. Promotions by subject .....	...	2	1	1	...	1	...	12	...	...	2	2	3	...	...	5	2	...	29	7.1
19. Double or special individual promotions .....	...	4	...	...	2	2	2	2	3	1	1	1	1	...	...	2	4	...	22	5.4
20. Extra-curricular activities .....	...	5	2	1	1	...	10	3	...	1	1	1	7	...	...	10	2	1	45	11.0
21. Grading on normal distribution within the group .....	...	...	...	...	...	2	1	3	...	...	...	...	1	...	...	1	1	...	9	2.2
22. Miscellaneous solutions <sup>3</sup> .....	...	2	...	2	2	3	7	12	...	...	3	...	11	...	...	4	11	1	58	14.1
Total .....	8	40	34	32	57	57	128	145	8	27	45	16	163	...	10	113	127	15	1,025	25.0
Average per school .....	2.0	2.4	2.8	2.5	2.6	2.5	2.7	3.1	1.0	2.7	2.5	4.0	2.5	...	2.5	1.8	3.0	1.4	2.5	...

<sup>3</sup>Case study by psychiatrist, summer school to make up credits, teachers visit homes, in small town teachers know and allow for differences, modification of methods, as drill for the dull, providing best teachers possible, teachers' meetings, interviews with parent or pupil, participation in school government, socialized recitation, permanent home room groups, weighted credits, dean of girls for girls' problems, special class for exceptional ability (Belleville, Ill.).



Table VII. Schools That Supplied Information for the North Central Association Junior High School Report for 1926-1927

## ARIZONA

NAME OF SCHOOL			CITY	PRINCIPAL
Curley	Junior	High	Ajo	C. C. Conley
Horace Mann	"	"	Bisbee	C. W. Chance
Gilbert	"	"	Gilbert	John Branigan
Willcox Union	"	"	Willcox	Ellis M. Barnett

## ARKANSAS

Arkadelphia	"	"	Arkadelphia	A. S. Turner
Batesville	"	"	Batesville	Don D. Lawson
Bentonville	"	"	Bentonville	Wilma Dickinson
Blytheville	"	"	Blytheville	Lucile M. Haley
Camden	"	"	Camden	J. L. Holt
Clarendon	"	"	Clarendon	H. B. Vineyard
Crossett	"	"	Crossett	Allen Lynch
Hot Springs	"	"	Hot Springs	V. E. Sammons
Jonesboro	"	"	Jonesboro	Annie Camp
East Side	"	"	Little Rock	S. C. Swearingen
Pulaski Heights	"	"	Little Rock	G. T. Huckaby
West Side	"	"	Little Rock	Charles F. Allen
North Little Rock	"	"	North Little Rock	J. C. Salmon, Jr.
Paragould	"	"	Paragould	Orine Porter (Miss)
Pine Bluff	"	"	Pine Bluff	Mattie Buchanan
Texarkana	"	"	Texarkana	Y. E. Montgomery (Mrs.)
Warren	"	"	Warren	C. R. Cook

## COLORADO

North Side Intermediate	"	"	Boulder	Susan M. Lovelace
University Hill Intermediate	"	"	Boulder	F. A. Boggess
Burlington	"	"	Burlington	
Aaron Grove	"	"	Denver	Homer S. Philips
Byers	"	"	Denver	Louise A. Merrill
Grant	"	"	Denver	Sam R. Hill
Fort Morgan	"	"	Fort Morgan	R. R. Brourink
Greeley	"	"	Greeley	Carrie Fashbaugh
Teachers College	"	"	Greeley	Arthur E. Mallory
Holly Consolidated	"	"	Holly	Eunice McLoughlin
Longmont	"	"	Longmont	Kent L. Sanborn
School District No. 1	"	"	Pueblo	James H. Risley

## ILLINOIS

East Side	"	"	Aurora	T. E. Moore
Belleville	"	"	Belleville	L. A. Butts
Central	"	"	Decatur	G. E. Nichols
Roosevelt	"	"	Decatur	H. F. Carmichael
East St. Louis	"	"	East St. Louis	M. E. Bruce



NAME OF SCHOOL				CITY	PRINCIPAL
Harrisburg	Junior	High	School	Harrisburg	James Shriver
Macomb	"	"	"	Macomb	Margaret Crain
Jefferson	"	"	"	Quincy	John W. Lewis
Webster	"	"	"	Quincy	S. F. Bonney
Abraham Lincoln	"	"	"	Rockford	B. M. Hanna
Theo. Roosevelt	"	"	"	Rockford	H. C. Muth
Washington	"	"	"	Rock Island	Owen B. Wright
Memorial	"	"	"	Taylorville	G. W. Wilcockson

## INDIANA

Anderson	"	"	"	Anderson	E. H. Fishback
Bloomington	"	"	"	Bloomington	H. E. Binford
Brazil	"	"	"	Brazil	A. W. Fishback
Crawfordsville	"	"	"	Crawfordsville	O. F. Deetz
Roosevelt	"	"	"	East Chicago	S. R. Wells
Washington	"	"	"	East Chicago	Roy W. Feik
Fairmount	"	"	"	Fairmount	Myrtle Gilbreath (Mrs.)
Hartford City	"	"	"	Hartford City	H. P. Kelsay
Alexander J. Kent	"	"	"	Kentland	Alvin C. Cast
Lebanon	"	"	"	Lebanon	V. L. Tatlock
James Whitcomb Riley	"	"	"	Logansport	Harold Littell
Lincoln	"	"	"	Logansport	Harold Littell
Junior-Senior	"	"	"	Martinsville	John M. French
Monticello (Six Year)	"	"	"	Monticello	D. R. Gordon
Mt. Vernon	"	"	"	Mt. Vernon	G. S. Rust
Wilson	"	"	"	Muncie	T. B. Colvert
No. Judson—Wayne Twp.	"	"	"	North Judson	C. C. Diettert
Davis Worth Dennis	"	"	"	Richmond	N. C. Heironimus
Julia E. Test	"	"	"	Richmond	Heth G. Smith
Shields	"	"	"	Seymour	B. R. Stewart
McLean	"	"	"	Terre Haute	W. C. Garretson
Sarah Scott	"	"	"	Terre Haute	Lawrence Jones

## IOWA

Boone	"	"	"	Boone	A. G. Umbreit
Public	"	"	"	Cedar Falls	L. R. Holmes
Thomas Jefferson	"	"	"	Council Bluffs	R. F. Myers
Sudlow Intermediate	"	"	"	Davenport	A. I. Naumann
West Intermediate	"	"	"	Davenport	C. Ernest Clarke
J. B. Young Intermediate	"	"	"	Davenport	Robert P. Redfield
Amos Hiatt	"	"	"	Des Moines	R. I. Grigsby
Abraham Lincoln	"	"	"	Des Moines	N. H. Weeks
Theodore Roosevelt	"	"	"	Des Moines	R. R. Cook
West	"	"	"	Des Moines	H. T. Steeper
Glidden Consolidated	"	"	"	Glidden	May Brittain
Indianola	"	"	"	Indianola	A. S. Lyness
Le Mars	"	"	"	Le Mars	E. Margaret Struble
Mount Pleasant	"	"	"	Mount Pleasant	Dora Heuer
Oelwein	"	"	"	Oelwein	Ray A. Bell
Sac City	"	"	"	Sac City	Fred J. Ehrhardt
East	"	"	"	Sioux City	D. A. Hayworth



NAME OF SCHOOL	CITY	PRINCIPAL
North Junior High School	Sioux City	M. H. White
West " " "	Sioux City	E. E. Briggs
Woodrow Wilson " " "	Sioux City	L. H. Wood
Storm Lake " " "	Storm Lake	Mame Schultz
East Waterloo " " "	Waterloo	R. M. Wyant
Waukon " " "	Waukon	E. J. McCreary

## MICHIGAN

Adrian " " "	Adrian	A. J. Hypes
Tappan " " "	Ann Arbor	Paul A. Rehms
Benton Harbor " " "	Benton Harbor	G. A. Thompson
Baldwin " " "	Birmingham	Melvin C. Hart
Boyne City " " "	Boyne City	Laura S. Hooper
Forest Park " " "	Crystal Falls	Sarah Munns
Condon " " "	Detroit	Norman Arthur
Hutchins Intermediate " " "	Detroit	H. L. Harrington
Jefferson Intermediate " " "	Detroit	A. M. Cotter
Miller Intermediate " " "	Detroit	Donald S. McGuire
Neinas Intermediate " " "	Detroit	John F. Grant
Sherrard Intermediate " " "	Detroit	J. V. McNally
Central " " "	Dowagiac	Josef G. Cauffman
Emerson " " "	Flint	O. F. Norwalk
Whittier " " "	Flint	Grace C. Pierce
Hamtramck " " "	Hamtramck	E. M. Conklin
Hancock " " "	Hancock	Bernard L. Davis
Highland Park " " "	Highland Park	William Prakken
Holland " " "	Holland	Minnie K. Smith
Houghton " " "	Houghton	Camden R. Kitson
Central " " "	Howell	Helen V. Matson
W. B. Lincoln " " "	Ionia	Lucile Higgins
Luther L. Wright " " "	Ironwood	H. L. Ylvisaker
East Intermediate " " "	Jackson	Percy Howe
West Intermediate " " "	Jackson	O. H. Epperson
Lincoln " " "	Kalamazoo	Carl R. Cooper
Washington " " "	Kalamazoo	D. J. Heathcote
Woodward " " "	Kalamazoo	Ruth Eaton
Pattengill " " "	Lansing	H. B. McKale
West " " "	Lansing	H. E. Gardner
Lapeer " " "	Lapeer	Minnie Alexander
Lowell " " "	Lowell	Berenice Kammeraad
Manistique " " "	Manistique	Carl F. Johnson
Ely " " "	Marquette	Mary B. Deasy
Midland " " "	Midland	E. G. Huff
Eastern " " "	Pontiac	Arthur Selden
Rochester " " "	Rochester	Linda T. Knorpp
Central " " "	Saginaw	N. W. Chaffee
North Intermediate " " "	Saginaw (W. S.)	Albert E. Case
South Intermediate " " "	Saginaw	I. Maxwell Brock
Sault Ste. Marie " " "	Sault Ste. Marie	E. D. Pierce
Central " " "	South Haven	J. V. McCulloch
Stambaugh " " "	Stambaugh	Ann K. Judish
Sturgis " " "	Sturgis	Mary G. Seitz



NAME OF SCHOOL		CITY	PRINCIPAL
Traverse City	Junior High School	Traverse City	Gladivin H. Lewis
Theodore Roosevelt	" " "	Wyandotte	L. F. Hire
Ypsilanti	" " "	Ypsilanti	Norris G. Wiltse

## MINNESOTA

Appleton	" " "	Appleton	Beth Peterson
Aurora	" " "	Aurora	F. A. Schrader
Austin	" " "	Austin	Guy V. Newcomer
Horace Mann	" " "	Biwalick	Philip Fjelsted
Buhl	" " "	Buhl	E. J. Oas
Chisholm	" " "	Chisholm	Ellis K. Schweickhard
Lincoln	" " "	Duluth	Carl T. Wise
Morgan Park	" " "	Duluth	Raymond D. Chadwick
Washington	" " "	Duluth	J. W. Meyer
West	" " "	Duluth	Laura McArthur
Eveleth	" " "	Eveleth	O. H. Schmidt
Faribault Senior and	" " "	Faribault	C. W. Cross
Fergus Falls	" " "	Fergus Falls	Allie V. Mitchell
Gilbert	" " "	Gilbert	M. F. Roberts
Glenwood	" " "	Glenwood	Myrtle Olson
Grand Rapids	" " "	Grand Rapids	A. Northby
Hibbing	" " "	Hibbing	F. Z. Donovan
Lincoln	" " "	(North) Hibbing	Roy Martin
Falls	" " "	International Falls	Ruth M. Weber (Mrs.)
Long Prairie	" " "	Long Prairie	Tilla Aske
Franklin	" " "	Mankato	Louis R. Kresensky
Bryant	" " "	Minneapolis	E. J. Hardaker
Edison	" " "	Minneapolis	Louis G. Cook
Franklin	" " "	Minneapolis	S. O. Severson
Jefferson	" " "	Minneapolis	E. R. Sifert
Jordan	" " "	Minneapolis	A. F. Benson
Lincoln	" " "	Minneapolis	Fred D. Lewis
Marshall	" " "	Minneapolis	Ross N. Young
Roosevelt	" " "	Minneapolis	Philip E. Carlson
Washburn	" " "	Minneapolis	A. E. McQuarrie
Owatonna	" " "	Owatonna	F. Keen Young
Plainview	" " "	Plainview	Mary Lahey
Preston	" " "	Preston	Minnie Hanson
Rochester	" " "	Rochester	Belva L. Snodgrass
Sauk Centre	" " "	Sauk Centre	Clifford M. Everhart
Cleveland	" " "	St. Paul	H. A. Trapp
Harding	" " "	St. Paul	E. N. Bonnell
John Marshall	" " "	St. Paul	R. C. Higbee
Monroe	" " "	St. Paul	John A. Norton
Murray	" " "	St. Paul	E. R. Edwards
Roosevelt	" " "	St. Paul	J. E. Reinke
Washington Senior and	" " "	St. Paul	Paul Th. Rusterholz
Woodrow Wilson	" " "	St. Paul	Arthur N. Gansemel
Sleepy Eye	" " "	Sleepy Eye	John Aitchison
Two Harbors Senior and	" " "	Two Harbors	M. C. Gallagher
Central	" " "	Waseca	Marie C. Heiberg
Worthington	" " "	Worthington	Herbert L. Garlough



## MISSOURI

NAME OF SCHOOL			CITY	PRINCIPAL
Cameron Senior and	Junior	High School	Cameron	Paul W. Osborn
Excelsior Springs	"	"	Excelsior Springs	E. J. Roseman
Central	"	"	Hannibal	O. L. Pierce
Eugene Field	"	"	Hannibal	Norvell F. Romjue
Stowell	"	"	Hannibal	B. M. Partridge
Higginsville	"	"	Higginsville	Kathryn Journey
Ernst Simonsen	"	"	Jefferson City	Chas. C. Crosswhite
Nevada	"	"	Nevada	Ruby V. Holt

## MONTANA

Baker	"	"	Baker	A. O. Gullidge
Bozeman	"	"	Bozeman	Robert Kindschy
Browning	"	"	Browning	Douglas Gold
Chinook	"	"	Chinook	Robert Julian
Harlem	"	"	Harlem	A. E. Garber
Lewistown	"	"	Lewistown	John L. Hill
Libby	"	"	Libby	Raymond W. Nessly
City Elementary Dist. No. 4	"	"	Livingston	Florence Goodson
Sidney	"	"	Sidney	Josephine Rogers
Whitehall	"	"	Whitehall	J. L. Houx

## NEBRASKA

Beatrice	"	"	Beatrice	R. B. Carey
Chadron	"	"	Chadron	Dora M. Coker
Fairbury Senior and	"	"	Fairbury	Guy R. Davis
Fremont	"	"	Fremont	Daisy Spickard
Friend	"	"	Friend	Helen I. Lewis
Walnut	"	"	Grand Island	Howard J. Finley
Barr	"	"	Grand Island	Elias F. Starr
Harvard	"	"	Harvard	Glenn M. Kendall
Hastings	"	"	Hastings	R. A. Watson
Holdrege	"	"	Holdrege	Eva A. King
Kearney	"	"	Kearney	A. W. Nelson
Laurel	"	"	Laurel	Alfreda Chase (Mrs.)
Lincoln	"	"	Lincoln	Will French
Whittier	"	"	Lincoln	C. L. Culler
26th and O Street	"	"	Lincoln	A. E. Folsom
North Platte	"	"	North Platte	James E. Knox
Red Cloud	"	"	Red Cloud	Myrtle Gelwick
Superior	"	"	Superior	.....

## NORTH DAKOTA

Roosevelt	"	"	Fargo	T. W. Blair
Jamestown	"	"	Jamestown	Emma Thompson
Valley City	"	"	Valley City	Elsie Reid
Williston	"	"	Williston	Chas. A. Severinson



## OHIO

NAME OF SCHOOL				CITY	PRINCIPAL
John A. McDowell	Junior	High	School	Ashland	David R. Frasher
Harbor	"	"	"	Ashtabula	H. A. Vollborn
Bedford	"	"	"	Bedford	Orvis C. Irwin
Bucyrus	"	"	"	Bucyrus	D. C. Baer
Memorial	"	"	"	Campbell	John W. Stewart
Central	"	"	"	Canton	C. H. Meyer
John H. Lehman	"	"	"	Canton	I. W. Delp
Lafayette Bloom	"	"	"	Cincinnati	Thomas W. Muir
Rothenberg	"	"	"	Cincinnati	O. M. Patton
Addison	"	"	"	Cleveland	Wayne G. Smith
Audubon	"	"	"	Cleveland	E. E. Butterfield
Brownell	"	"	"	Cleveland	L. M. Marshall
Central	"	"	"	Cleveland	Elbert C. Wixom
Fowler	"	"	"	Cleveland	A. T. Carr
Lincoln	"	"	"	Cleveland	James B. Smiley
John Marshall	"	"	"	Cleveland	C. R. Dustin
Patrick Henry	"	"	"	Cleveland	Barnett W. Taylor
Rawlings	"	"	"	Cleveland	Benj. R. Eggeman
South	"	"	"	Cleveland	Edwin L. Findley
West	"	"	"	Cleveland	David P. Simpson
Roosevelt	"	"	"	Cleveland Heights	L. B. Brink
Everett	"	"	"	Columbus	H. C. Marshall
Franklin	"	"	"	Columbus	E. P. Hatton
Grandview	"	"	"	Grandview Heights (Columbus)	Bonita Jamison
Highland	"	"	"	Columbus	H. H. Reighley
Emerson	"	"	"	Dayton	William Prinz
Daniel Kiser	"	"	"	Dayton	Emerson H. Landis
Parker (1st year only)	"	"	"	Dayton	E. A. Siebert
J. C. Donnell	"	"	"	Findley	W. L. Swaidner
Fremont	"	"	"	Fremont	C. A. Hudson
Geneva	"	"	"	Geneva	H. E. Peck
Girard	"	"	"	Girard	R. H. Getz
Glouster	"	"	"	Glouster	H. L. Holter
Greenville	"	"	"	Greenville	C. L. Bailey
Ironton	"	"	"	Ironton	C. E. Larson
Horace Mann	"	"	"	Lakewood	C. C. Clark
Warren Harding	"	"	"	Lakewood	Robert L. Meeks
South	"	"	"	Lima	J. H. Davison
Logan	"	"	"	Logan	E. E. Smith
Hawthorne	"	"	"	Lorain	E. E. Buell
Irving	"	"	"	Lorain	S. A. Kurtz
Whittier	"	"	"	Lorain	R. B. Faris
Elizabeth Zane	"	"	"	Martins Ferry	F. W. Bowen
Elm	"	"	"	Martins Ferry	W. E. Suter
Longfellow	"	"	"	Massillon	J. C. Tannehill
Lorin-Andrews	"	"	"	Massillon	R. F. Klar
Nelsonville	"	"	"	Nelsonville	R. E. Orr
Joseph Welty	"	"	"	New Philadelphia	O. E. Snyder
Bennett	"	"	"	Piqua	William S. Segar



## NAME OF SCHOOL

## Junior High School

## CITY

## PRINCIPAL

Wilder			Piqua	H. B. Hensler
Central	"	"	Springfield	Charles L. Harris
Frey	"	"	Springfield	E. H. Brown
Roosevelt	"	"	Springfield	Edgar G. Weller
Schaefer	"	"	Springfield	Willis S. Mozier
Snyder Park	"	"	Springfield	H. S. McCoy
Warren G. Harding	"	"	Steubenville	F. H. Duffy
Tiffin	"	"	Tiffin	Wilbert W. Martin
Upper Sandusky	"	"	Upper Sandusky	George Rilling
Central	"	"	Warren	H. B. Wood
West	"	"	Warren	Harriett Fletcher
Wilmington	"	"	Wilmington	J. O. Villars
Central	"	"	Xenia	Spencer Shank
Grover Cleveland	"	"	Zanesville	J. R. Richards
Theodore Roosevelt	"	"	Zanesville	E. D. Cleary

## OKLAHOMA

Emerson	"	"	Enid	Rex Cleveland
Longfellow	"	"	Enid	Lloyd T. Noel

## SOUTH DAKOTA

Aberdeen	"	"	Aberdeen	W. E. Dunn
Central	"	"	Madison	M. E. Stuart (Miss)
Mitchell	"	"	Mitchell	Lottie M. Jones
Watertown	"	"	Watertown	W. L. Moore

## WEST VIRGINIA

Anawalt	"	"	Anawalt	Gale J. Graham
Barboursville	"	"	Barboursville	C. N. Fannin
Barrackville	"	"	Barrackville	Otis H. Milam
Beards Fork	"	"	Beards Fork	W. A. Wilson
Beckley	"	"	Beckley	H. E. Carmichael
Belington	"	"	Belington	C. G. Elder
Big Sandy	"	"	Big Sandy	Paul Homishell
Bramwell	"	"	Bramwell	L. L. Coif
Bridgeport	"	"	Bridgeport	Thomas R. Hornor
Buckhannon	"	"	Buckhannon	Ross Bonar
Burchfield	"	"	Burchfield	D. E. Clark
Cass	"	"	Cass	F. A. Reed
Chapmanville	"	"	Chapmanville	B. H. Snidow
Thomas Jefferson	"	"	Charleston	Mabel Gibbons
Lincoln	"	"	Charleston	Gertrude M. Reynolds (Mrs.)
Roosevelt	"	"	Charleston	Dwight F. Pullen
Woodrow Wilson	"	"	Charleston	F. Ray Power
North View	"	"	Clarksburg	Henry L. Ash
Big Sandy District	"	"	Clendenin	H. H. Osborne
Davy	"	"	Davy	V. A. Bailey
Fayetteville	"	"	Fayetteville	John H. Toler
Folsom	"	"	Folsom	A. H. Anderson
Adkin District	"	"	Gary	B. E. Kimble
Glen Jean	"	"	Glen Jean	G. B. Bobbitt



NAME OF SCHOOL	CITY	PRINCIPAL
Holden Junior High School	Holden	D. D. Riley
Cammack " "	Huntington	C. M. Ashburn
Central " "	Huntington	J. R. Miller
Enslow " "	Huntington	H. E. Danford
Lincoln " "	Huntington	O. E. Hodge
Vinson " "	Huntington	R. J. Worthington
West " "	Huntington	George M. Haldane
Jacksonburg " "	Jacksonburg	L. J. Furbee
Keystone " "	Keystone	C. M. Eddy
Keystone Eckman " "	Keystone	S. G. Hough
Browns Creek District " "	Kimball	Edgar W. Barrier
Kimball " "	Kimball	A. D. Robertson
Kingston " "	Kingston	Silas Walker
Wake Forest " "	Laing	H. E. Brown
Leewood " "	Leewood	D. M. McKown
Gallagher " "	Livingston	Clyde Billups
Logan " "	Logan	F. A. McAllister
Grant District " "	Lost Creek	W. B. Moyers
Lundale " "	Lundale	J. Randall Crow
Eagle District " "	Lumberport	Chester W. Martin
Man " "	Man	Irving Rigdon
McComas " "	McComas	Ward E. Gamble
Du Bois " "	MacDonald	
Ziesing " "	Meadowbrook	Columbus Ash
Macadam " "	Montcalm	M. S. Grim
Montgomery " "	Montgomery	R. A. Lee
Simmons " "	Montgomery	G. W. Whiting
Oak Hill " "	Oak Hill	Beatrice Jarrell
Omar " "	Omar	Harold E. Starcher
Page " "	Page	M. E. Kincaid
Pax " "	Pax	D. W. Allen
Powellton " "	Powellton	T. F. Bartlett
Pratt " "	Pratt	Kenneth E. Chenoweth
Scarbro " "	Scarbro	W. C. Washington
Springton " "	Springton	Paul L. Davis
Weirton " "	Weirton	Laura Edmiston
Dunbar (Colored) " "	Welch	Q. A. Connolly
Welch " "	Welch	S. C. Grose

## WISCONSIN

Antigo " "	Antigo	Lillian V. Ladwig
McKinley " "	Appleton	F. B. Younger
Roosevelt " "	Appleton	A. G. Oosterhous
Wilson " "	Appleton	Dr. M. H. Small
Augusta " "	Augusta	R. W. Smith
Lincoln " "	Beloit	Nellie E. Jones
Roosevelt " "	Beloit	Frances Glenn
Chippewa Falls " "	Chippewa Falls	Jessie Davie (Mrs.)
Cudahy " "	Cudahy	T. C. Klett
Roosevelt " "	Fond du Lac	R. B. Woodworth
Washington " "	Green Bay	Henry F. Sutton



NAME OF SCHOOL	CITY	PRINCIPAL
Janesville	Janesville	W. W. Brown
Central	Kenosha	D. T. John
Lincoln	Kenosha	Maude Shelton
McKinley	Kenosha	J. R. Redstrom
Washington	Kenosha	L. F. Rahr
Lincoln	La Crosse	D. H. Shepardson
Logan	La Crosse	H. G. Hayden
Emerson	Madison	Leo P. Schleck
Longfellow	Madison	C. Lorena Reichert
Randall	Madison	Florence A. Dodge
Willard D. Purdy	Marshfield	L. H. Dressendorfer
Merrill	Merrill	George F. Brooks
Oconto Falls	Oconto Falls	H. M. Anderson
Roosevelt	Oshkosh	Bertha Jones
Prairie du Sac	Prairie du Sac	R. S. Babington
Franklin	Racine	H. U. Wood
McKinley	Racine	H. C. Kilburn
Washington	Racine	Thomas E. Sanders
River Falls	River Falls	Theresa MacMeir
Shorewood Senior and	Shorewood	Oscar Granger
Sparta	Sparta	Nicholas Gunderson
Stoughton	Stoughton	G. L. Whittingham
Bryant	Superior	Agnes E. Bury
Ericsson	Superior	L. K. Wornstaff
Franklin	Superior	W. G. Campbell
Martin Pattison	Superior	LeRoy J. Doleysh
Washington	Two Rivers	L. B. Clarke
Waukesha Senior and	Waukesha	J. E. Worthington
Wausau	Wausau	G. W. Bannerman
Wauwatosa	Wauwatosa	E. L. Giroulx
West Allis	West Allis	R. O. West

## WYOMING

Casper	Casper	Ray E. Robertson
Cody	Cody	Josephine Kollmyer
Clark	Evanston	G. W. Kurtz
Glenrock	Glenrock	Cora E. Grant (Mrs.)
Green River	Green River	Helen Haynes
Greybull	Greybull	Margaret Wallace
Kemmerer	Kemmerer	Eldon Breeden
Laramie	Laramie	J. E. Thayer
Powell	Powell	Jessie Thomas
Rawlins	Rawlins	H. H. Moyer
Thermopolis	Thermopolis	Leo E. Martin

Total number of schools making this report—410.



### Interpretation of the Statistics Presented

TABLE I

(A) The number of schools which contributed to the report submitted in 1925 was 233. The number which contributed in 1926 was 337. The number for 1927 is 410.

In 1926, thirty-six reports were received from Kansas and three reports were received from New Mexico. For 1927, no reports were received from either of these states.

(B) Comparative enrollments in the junior high schools reporting in the last four years are as follows:

1. October 1, 1923-----	112,828
2. October 1, 1924-----	137,828*
3. October 1, 1925-----	167,553
4. October 1, 1926-----	188,054

This is an increase of 12.2% in one year. It is an increase of 66.6% for October 1, 1926 over October 1, 1923.

(C) The comparative enrollments by states on October 1, 1924, October 1, 1925, and October 1, 1926, are shown as follows:

State	Total 1924 enrollment	Total 1925 enrollment	Total 1926 enrollment
Arizona .....	73	448	532
Arkansas .....	5,520	5,981	7,339
Colorado .....	2,982	3,183	6,213
Illinois .....	3,900	5,852	7,659
Indiana .....	4,370	5,770	10,531
Iowa .....	9,417	10,325	11,641
Michigan .....	24,667	32,964	33,794
Minnesota .....	10,644	12,090	26,554
Missouri .....	8,088	10,200	2,138 <sup>1</sup>
Montana .....	685	792	1,257
Nebraska .....	4,110	5,222	6,448
North Dakota .....	1,463	1,464	1,542
Ohio .....	31,473	37,911	40,815
Oklahoma .....	6,617	10,508	1,203 <sup>2</sup>
South Dakota .....	1,365	1,490	1,827
W. Virginia .....	90	90	10,625
Wisconsin .....	4,930	6,057	16,328

Wyoming .....	428	882	1,608
Total .....	137,828*	167,553	188,054

\*These are the corrected figures. The first report showed only 129,917.

<sup>1</sup>On October 1, 1925, enrollments were reported for 16 schools; in 1926, for 8 schools.

<sup>2</sup>On October 1, 1925, enrollments were reported for 19 schools; in 1926, for 2 schools.

TABLE II

The prevailing type of organization of junior high schools in North Central territory includes grades seven, eight, and nine. 347 schools, constituting 84.6% of the total, have this type.

TABLE III

Junior high school enrollments constitute 13.3% of the total enrollments of the school systems which reported their figures for October 1, 1926.

TABLE IV

The number promoted from the ninth grade to the tenth in the 324 schools which reported in 1926 was 38,608. The corresponding number of promotions reported in 1927 by 334 schools is 45,268.

TABLE Va

Of the various ways by which junior high schools determine the individual differences of their pupils, intelligence tests are used by 72.2% of the total number of schools reporting; school records, used by 46.8% of the schools, rank next; teachers' judgments, used by 44.4% of the schools, and standard achievement tests, used by 38%, follow next in order.

It is obvious from these percentages that many schools use more than one method of determining differences.

TABLE Vb

The Terman Group Tests of Intelligence and the Stanford Achievement Tests outrank all other tests by considerable amounts in each case.



TABLE VI

Of the various ways by which junior high schools attempt to solve the problems arising out of the individual differences of their pupils, homogeneous grouping on the basis of mental ability outranks all others. 58.2% of the number of schools reporting use this method. It is rather significant that sex segregation, used by 2% of the schools reporting, is employed less frequently than any other method. It is significant, also, that 26.8% of the schools are attempting to adapt the content of the subject matter in the courses to the needs of the homogeneous groups.

The Committee notes with interest that most of the junior high schools in North Central territory are making a serious effort to discover individual differences and to make suitable provision for these differences as they are discovered. In some quarters, to be sure, there is failure to study this problem with the earnestness that it deserves. In many other places there is a good deal of blind groping for light. The data presented show quite conclusively that much re-

mains to be done before it can be said that the problem of individual differences has been solved in the schools.

In closing its report the Committee makes three recommendations as follows:

1. That all junior high schools be requested to give further consideration to the problem of individual differences and that they be requested to report the results of their investigations through the pages of the North Central Association Quarterly.

2. That the Committee on Junior High Schools be continued with instructions to observe and to report upon other aspects of the junior high school problem.

3. That the Commission on Secondary Schools request the Association to repeat its urgent invitation to the colleges included within the North Central territory to revise their terms of admission in such manner as to permit students to qualify for entrance on the basis of units of work—eleven or twelve in number—accomplished in the last three grades of the secondary school.



# Preliminary Report: Committee on Professional Training of High School Teachers in North Central Territory

BY WILL C. FRENCH, LINCOLN, NEBRASKA

## Introductory Statement

This committee having been in existence but six weeks will submit a very brief preliminary report. The magnitude of the task assigned is apparent from the wording of the resolution asking the Commission on Unit Courses and Curricula to undertake the work. The following is the resolution or motion responsible for the creation of this committee:

"Moved that the Commission on Unit Courses and Curricula be requested to initiate an investigation of the general problem of the professional training of high school teachers, including a study of typical domestic and foreign methods, with a view, first, to determining whether and to what extent graduate instruction should supplement or be substituted for the present system of undergraduate teacher training courses. Second, to securing for prospective teachers the benefits of effective practice teaching under competent direction. Third, to indicate a procedure that may bring about more uniformity in the minimum legal requirements of the various states in the North Central territory with reference to the professional training of teachers."

The committee recognizes that it can not undertake the solution of *all* the various problems and studies set out and implied in this resolution. It proposes to make no attempt to do so. It proposes

to make no attempt to compete with endowed, permanently staffed organizations working on this problem. It conceives its immediate task as one of reporting at early dates to the Commission on Unit Courses and Curricula and thence to the North Central Association itself certain *facts* relative to professional training of high school teachers in North Central States. Its ultimate task may involve relatively long periods of observed experiment or may require careful evaluation of findings as its preliminary investigations may warrant and the Association may subsequently desire.

## Tentative Plan of Attack

In order that the committee may operate within its abilities and means it expects to confine its activity for the coming year to the conduct of some *factual* studies in the field and report upon some definite, specific and not too complicated problems. By so doing it hopes to keep out of the realm of mere opinion. In the field of professional training of high school teachers we are skeptical of opinions even when they are the opinions of experts.

For the first year, then, the committee hopes to set up the machinery and expects to report next year upon part of the following studies:

1. *A resume of the literature of the field of the professional training of high school teachers.*

Much material is available. Some is



not widely distributed and certainly not widely read. Our aim will be to publish through the North Central Quarterly a briefed, abstracted, digested account of best studies now existing. This study will show us the necessity for further studies and what is here revealed may modify the present plans of the committee.

2. *Present Practice in Nomenclature and Content in Courses in Education.*

Some material now available and known to some extent by this group indicates a wide and diverse practice in North Central schools in both name and content. In teacher training courses, the label on the package is no guarantee of the contents. We need in teacher training courses a pure food and drug act.

3. *A Factual Study of the Types of, Arrangements for and Operation of Practice Teaching Work in North Central Colleges.*

Practice teaching apparently means many things to different colleges. We hope to formulate a report which will call attention to conditions and perhaps point the way to setting up a better practice.

4. *A Study of Minimum Legal Requirements in Professional Courses.*

We expect to include all states bringing the statement of requirements up to 1927. We want to know both the total number of hours required and the type of courses accepted as fulfilling the requirement.

5. *A Study of the Maximum Allowance in Hours of Education Counted by North Central Colleges toward an Undergraduate Degree.*

In times past it has been a question of getting candidates to offer the minimum requirement. Now one of our Commissions reports that some colleges are per-

mitting up to 50 or 60 hours in education out of the 120 hours required for the undergraduate degrees. How general is this practice? If it is general a subsequent study of the desirability of such a practice might be undertaken.

These five factual studies have been tentatively set up by the committee for this year.

We shall be glad for criticisms of these proposals and also for additional suggestions from those responsible for teacher training in North Central Colleges.

**Committee Asks Cooperation of Graduate Students in Education**

We should also like to enlist aid from those directing graduate research in education in these colleges. This committee can cover this ground only by securing the aid of capable graduate students. The chairman of the committee will be glad to communicate with those in charge of graduate research in education who have students who might be interested in these problems or in others which may be added to this tentative preliminary list.

The full committee consists of the following persons:

- L. W. Brook,  
Wichita, Kansas.
- F. E. Henslik,  
University of Kansas.
- H. L. Miller,  
University of Wisconsin.
- H. H. Ryan,  
University of Michigan.
- M. H. Stuart,  
Indianapolis, Indiana.
- C. H. Threlkeld,  
Des Moines, Iowa.
- G. W. Willett,  
La Grange, Illinois.
- Will French, Chairman,  
Lincoln, Nebraska.



## An Abstract

The following is an abstract of the remarks made by J. C. Hanna on the question: "Is there a danger that in the attention we are giving to problems of administration and curriculum, we are neglecting the fundamental matter of actual teaching. (North Central Association, Commission on Secondary Schools. March 17, 1927).

The North Central Association has definite and well known standards.

These are enforced through annual hasty examination of reports from the schools and more thoroughly by the state committees whose recommendations are largely, and should be, followed by the Commission.

But the actual work of visiting and inspecting of the schools is done solely by officials of the state universities and state departments of education and is financed by them.

The published standards for accrediting have to do with the following items:

1. Buildings.
2. Library and Laboratories.
3. Records.
4. Requirements for Graduation.
5. Instruction and Spirit.
6. Salaries.
7. Preparation of Teachers.
8. The Teaching Load.
9. The Pupil Load.
10. The Program of Studies.

Inspection without intelligent and sympathetic supervision seems a work hardly justified.

A large proportion of both principals and teachers are comparatively inexper-

ienced and with little previous training. The requirement (for academic teachers only) of fifteen semester hours of professional education seems sometimes to have little vital relation to actual good teaching.

Teaching teachers to organize subject matter, how to evaluate work, how to conduct new sorts of tests, how to segregate according to intellectual quotients—these have not necessarily much to do with actual teaching teachers to teach.

The pupil is exposed to the teacher in any subject only one and thirty-eight hundredths of the total time in one year; hence most of that small fraction should be occupied in teaching rather than in examining or grading or "developing the subject matter."

Does the North Central concern itself with anything beside buildings, libraries, apparatus, teacher load, curriculum, semester hours and degrees?

The experience of one who visits schools and constantly leads him to long to do something to aid teachers to avoid bad technique, use devices wisely, follow sound principles of method, use personality, utilize the class group as an instrument of instruction, study individualities, develop the power of expression, arouse desire, kindle appreciation of the real aims in school.

These seem more worth while than much of what educational leaders spend their time upon.

"Ye pay tithes of mint and anise and cummin and neglect the weightier matters of the law. These ought ye to have done and not to have left the other undone."



## An Abstract

### What are the Aims of The North Central Association?

The following is an abstract of an address given before the Commission on Secondary Schools, March 18th, 1927, by J. E. Edgerton of the State Department of Education of Kansas on the "Aims of the Association."

1. The Association has been the active force in standardization throughout the twenty states comprising North Central territory; the standards have been liberal enough to win the respect and admiration of schools and communities.

2. One of the aims has been to make free interchange of high school students between and among states and colleges in the territory.

3. Since the organization of the Association not more than the equivalent of three academic teachers have been required to make a school eligible to membership. No embarrassment nor humiliation has arisen to vex any question of standards on account of the number of teachers employed. Many of these small schools have fully met every requirement of the Association. In the future, under the present Standard 10, no new schools will be admitted with a less number of full-time academic teachers than five.

4. Small high schools have furnished the men and women who are running

the business, society and government of the country. Even many of the most distinguished members of this Association no doubt received their secondary education in some dinky little high school.

5. These schools now under discussion have excellent teachers, who hold good college degrees and most of them have been especially trained for teaching. It has been possible to give them mainly subjects upon which they based their major or minor in college work. These teachers work together as unit in and out of school and it is "all for each and each for all." Thus, they have valuable personal knowledge of each student and great character molding opportunities. Hence, the value of their product.

6. We should broaden our aims, not narrow them. Our aim should be, first, to offer greater opportunities to all struggling high schools able to meet all our standards excepting as to the number of academic teachers. High school students and communities should not be penalized on account of mere location, and environment. They should have a chance to make good despite these obstacles. Our second aim should be to help them to opportunities for a good college education.

7. We can afford to leave the question of the mere number of teachers very largely to the judgment of the State Committee.



# University Reform Sixty Years Ago \*

JOHN FISKE

*Selections from Article in Atlantic Monthly, April 1867*

The whole duty of a university toward those who are sheltered within its walls may be concisely summed up in two propositions. It consists, first, in stimulating the mental faculties of each student to varied and harmonious activity, —in supplying every available instrument for sharpening the perceptive powers, strengthening the judgment, and adding precision and accuracy to the imagination; secondly, in providing for all those students who desire it the means of acquiring a thorough elementary knowledge of any given branch of science, art or literature. In a word, to teach the student how to think for himself, and then to give him the material to exercise his thought upon—this is the whole duty of a university.

\* \* \* \* \*

It is desirable that our opinions should be correct, but it is far more desirable that they should be arrived at independently and maintained with intelligence and candor. Sceptical activity is better than dogmatic torpor; and our motto should be Think the truth as far as possible, but above all things, think.

\* \* \* \* \*

An endless amount of discussion has been wasted over the question whether a

mathematical or a classical training is the more profitable for the majority of students. The comparative advantages of spending all one's time upon one favorite pursuit, and of devoting more or less attention to various branches of study, have also supplied the text for much vague and unsatisfactory discourse. By the view of university education here adopted, these questions are placed in a somewhat favorable position for getting disposed of. The office of the university is not to enforce doctrine, but to point out method. It is not so much to cram the mind of the student with divers facts, which in after life it may be useful for him to have learned, as to teach him the proper mode of searching for facts, and of dealing with them when he has found them.

\* \* \* \* \*

Universal logic, therefore,—the relations of phenomena to each other, and the methods of investigation and modes of proof applicable to widely different subjects,—should occupy an important place in college teaching. And that this end can be secured by studying any one kind of science alone is of course impossible.

\* \* \* \* \*

The ability to imagine relations is one of the most indispensable conditions of all precise thinking. No subject can be named, the investigation of which it is not imperatively needed; but it can nowhere else be so thoroughly acquired as in the study of mathematics. This fact

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\*The article here presented was submitted by George N. Carman, of Lewis Institute, Chicago, with the comment that, it would be well if members of our Association would read and ponder what Fiske wrote sixty years ago. Mr. Carman thinks the thoughts voiced by Mr. Fiske are as timely now as when written.—The Editor.



alone is sufficient to justify the University in requiring its students to devote some attention to such a study.

\* \* \* \* \*

Once inured to the habit of accurately imagining abstract relations, recognizing the true value of symbolic conceptions, and familiarized with a fixed standard of proof, the mind is equipped for the consideration of quite other objects than lines and angles. The twin treatises of Adam Smith on social science, wherein, by deducing all human phenomena first from the unchecked action of selfishness and then from the unchecked action of sympathy, he arrives at mutually-limiting conclusions of transcendent practical importance, furnish for all time a brilliant illustration of the value of mathematical methods and mathematical discipline.

\* \* \* \* \*

Chemistry and concrete physics have their means of arriving at truth, very different from those employed in mathematics, but quite as essential to sound scientific thinking. To acquire expertness and elegance in the use of deductive methods, while remaining contentedly ignorant of the fundamental canons of induction, is to secure but a lame and one-sided mental development. It is often remarked, that many men, whose opinions upon any subject with which they are familiar are sober enough, do not scruple to utter the most childish nonsense upon topics with which they are only partially acquainted. The reason is, that they have learned to think correctly after some particular fashion, but know nothing of the general principles on which thinking should be conducted. They are what is fitly called narrow-minded; and since each branch of knowledge is more or less closely interlaced with every other branch, a

searching scrutiny will usually show that even in their control of their own specialty there is ample room for improvement. Each science has its logical methods and its peculiar species of evidence; and to insure an harmonious development of the mental powers, there is no practicable way except to obtain a knowledge of all.

To acquire such a command of scientific methods, it is not necessary, even were it possible, to devote much study to the details of each separate science. To master the details of any single science is a task for the accomplishment of which a lifetime is much too short. Recollecting, however, that not doctrine, but method, is for the student the thing above all others needful, it will be seen that our scheme does not make too great demands even upon the limited time embraced in a university course. The principles of investigation involved in every one of the inductive sciences might easily be learned in the time now devoted to the acquisition of facts in chemistry alone. The college now attempts to teach chemistry as if each student might possibly come to be a physician, metallurgist, or pharmaceulist in after life. And the amount of time spent upon it is out of all proportion to that allotted to the other natural sciences, some of which, as anatomy and geology, are not even included in the regular course of electives. But total ignorance of organs and tissues is too great a price to pay for even an extensive acquaintance with acids and salts. The study of chemical details should be reserved for the elective course, of which we shall presently treat. The fundamental principles of chemistry, its relation to kindred sciences, the scope which it affords for observation and experiment, the philoso-



phical value of its unrivalled nomenclature,—these are matters of universal importance, and their study forms an inseparable part of a catholic education. As thus conducted, the study of chemistry need not consume more than one third of the time at present assigned it, and other sciences, now sadly neglected, might assert their just claims to attention.

\* \* \* \* \*

Zoology and botany are pre-eminently the sciences of classification; and if skill in the use of this powerful auxiliary of thought is ever to be acquired, it must be sought in the comparative study of the vegetable and animal kingdoms. Theoretical logic may divide and subdivide as much as it likes; but genera and species are dull and lifeless things, when contemplated merely in their places upon a logical chart. To become correct reasoners, it is not enough that we should know what classes and sub-classes are; we should also know how to cunningly make them. From pure considerations of discipline, therefore, biology should form one of the regular studies of the university course, and some proficiency in it should be expected of every candidate for a bachelor's degree.

\* \* \* \* \*

There is less need for insisting upon the value of psychology, metaphysics, and logic, as instruments of mental discipline, since few persons are disposed to call it in question. In following a difficult metaphysical discussion, all the intellectual faculties are brought into healthful activity; and although men may reason well without understanding the nature of the psychical processes, there is no doubt that an acquaintance with psychol-

ogy guarantees its possessor against the adoption of many a plausible fallacy. After the student has acquired, through his scientific studies, some dexterity in the use of logical methods, he will approach, with all the more interest and enthusiasm, the study of those methods as organized into a coherent system. In view of what has already been said, it is almost unnecessary to add, that we do not regard the science of logic as consisting solely of the doctrine of the syllogism. It will no longer do to ignore the fact that induction has its tests and canons, as well as deduction. Mr. Mill's great treatise has been before the public for nearly a quarter of a century; and though far too learned and ponderous for a text-book, its introduction into the college course, in an epitomized form, would be attended with happy results. As for metaphysics, much of its value in education depends upon the catholicity of the spirit in which it is taught. Metaphysical doctrines are not so incontrovertibly established as the leading theorems of physical science. On nearly every question there are at least two mutually incompatible opinions, while on some points there are scores of such. The latest speculations do not, as usually happens in science, render antiquated the older ones; and accordingly, in teaching metaphysics, extensive use should be made of the historical method of presentation. Recitations from the text-book might profitably be combined or alternated with lectures upon the history of philosophy, in which the aim should be to indicate as graphically as possible the relations sustained by each system to its predecessors. In default of any such arrangement, the University already possesses, in the works of Sir William Hamilton, with their profound historical



consciousness, the best attainable substitute.

The study of history, with reference to the scientific methods involved in it, would in a university be utterly impracticable. That there is a causal sequence, which must sooner or later admit of being formulated, in the tangled and devious course of human affairs, we not only readily grant, but we also steadfastly maintain. But speculations of this sort are too hopelessly abstruse, and require too vast and minute a knowledge of details, to be profitably included even in the most advanced undergraduate course. Historical laws cannot, like physical laws, be obtained from the inspection of a few crucial instances. The enormous heterogeneity of social phenomena forbids their becoming amenable to any such process. Only in political economy, and to some extent in ethics, where the action of certain moral forces is independently treated, can the student be expected to comprehend general truths. Far from being in a condition to appreciate general views of historic evolution, he is usually ignorant of most of the leading facts upon which they are founded. Historical instruction therefore, must continue to consist chiefly in the exposition of details. It is important, however, that the attention should be principally directed toward those events which have constituted turning-points in human progress.

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Above all, the essential unity and continuity of ancient and modern history should be kept steadily in view; and to this end, far more importance should be assigned to the history of Imperial Rome than is now the case. Ancient history will always, as at present, be best studied in connection with ancient languages

and literature. And this remark suggests the last of the subjects requiring notice in our brief survey, in proceeding to consider which, let it be premised that the most inestimable benefits arising from the study of history are here passed over, as implied in what we shall have to say about the classics.

If we have reserved the last place for the mention of classical studies, it is not because we esteem them least in value. After what has been said concerning the advantages of mathematical and scientific training, our assertion of the paramount importance of the classics will incur no risk of being ascribed to one-sided prejudice. We therefore make no scruple of recording our opinion that, both in quantity and in quality, the mental discipline obtainable from the intelligent study of Greek and Latin languages equals that which can be acquired by any other educational means whatever. To which it may be added, that, if accuracy and precision are most thoroughly imparted by the study of exact science, on the other hand practical sagacity, catholic sympathies, and breadth of view are the qualities most completely developed by philological and literary pursuits. Indeed, were it not for the amount of attention so generally bestowed upon the literatures and dialects of Greece and Rome, our intellectual sympathies would become contracted to a deplorable degree. As Dr. William Smith has observed, "their civilization may be said to be our civilization, their literature is our literature, their institutions and laws have moulded and modified our institutions and laws; and the life of the Western nations of Europe is but a continuation of the life of Greece and Rome." The reasons habitually adduced for studying the history of our own country and that



of England, from which our political institutions most directly emanate, apply with scarcely inferior cogency to the study of that antique civilization, whence the best and most enduring elements of our social structure, our science, laws, and literature, even most of our religious ideas, are ultimately derived. And how much or how little of ancient life can be comprehended without knowledge of ancient languages, we are willing to let every classically educated man declare for himself. There is thus a profound reason for the fact that universities have ever made the classic languages the basis of their instruction.

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Not only does classical scholarship ripen the judgment and widen the sympathies; it also affords unrivalled scope for the exercise of practical sagacity. In order to acquire tolerable proficiency in the use of an ancient language, it is necessary to go through with an endless amount of reasoning, classifying and guessing. Hypotheses must be skillfully framed, inferences must be correctly drawn, probabilities must be carefully balanced; a high degree of shrewdness must continually be applied to the solution of questions for the moment of practical importance, and to the removal of constantly occurring practical difficulties. The kind and amount of discipline thus obtained far excels any which can be got from the study of modern languages, all of which, from the Portuguese to Russian inclusive, can be learned by the classical scholar with less labor and in less time than it has taken him to master his Greek and Latin. It is a grave error to suppose that all this mental exertion can take place without beneficial effect upon the after life of the student.

Even if he is so unwise or so unfortunate as to allow his classical attainments to slip from his memory, he will be the better fitted for all the business of life, by reason of the exercise which they have entailed. Whatever native keenness and capacity for patient drudgery he may have in him will show itself developed and strengthened, just as his alertness and muscular vigor will be the better for his early rowing and cricket-playing, though he may never touch bat or oar again. Impatient utilitarianism, in directing all education to immediate practical ends, and in turning universities into polytechnic schools, sacrifices more than it gains.

Lastly, the current argument against classical studies, that, though imparting vigor and keenness to the mind, they are not immediately applicable to practical or professional purposes, is precisely one of the strongest arguments in their favor. "In proportion as the material interests of the present moment become more and more engrossing, more and more tyrannical in their exactions, in the same proportions it becomes more necessary that man should fall back on the common interests of humanity, and free himself from the trammels of the present by living in the past." In this age of hurry and turmoil, these words of the lamented Donaldson are daily assuming more and more of vital significance. If there is ever to be a limit to the minute subdivision of labor, if the excessive specialization of employments is not to go on unchecked by counter-processes, if man is not to be graded into a mere producing and manufacturing automaton, if individuality of character is destined to reassert its antique pre-eminence, this must be brought about by sedulously fostering those pursuits which



are not directly subservient to objects of narrow utility.

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These are benefits too priceless to be thrown away, in order that our young men may gain a year or two for their professional labors; and they are amply sufficient to justify the University in continuing, as it has always done, to make classical scholarship an indispensable part of a liberal education.

Our hasty survey of these various departments of study brings to light claims on the part of each one which cannot wisely be ignored. In order to adequately perform its first great duty of evoking the mental capacities, the University must extend some recognition to all. Some proficiency in mathematics, in each of the physical and moral sciences, in history, and in classics should be demanded of every student who wishes to take a degree. The amount of work needful to be done in each of these branches in order to satisfy the requirements of a liberal education, it is for professors and tutors to determine. But we may here extend to all required studies the suggestion already made in regard to chemistry, that only a minimum of attainment should be expected of the whole body of students.

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Satisfactory results could easily be obtained, if the head of each department were to fix the minimum to be required in his own specialty, subject to the concurrence of the representatives of all the other departments. The course of study, thus regulated, would slightly resemble what at Oxford is called the "pass-course," and all parts of it should be made compulsory for all students.

In advocating the adoption of a required course so extensive and yet so

elementary, our aim is not to encourage crude smattering or vain sciolism, but to enable the student to approach his own special subject in the light thrown upon it by widely different subjects, and with the varied mental discipline which no single study is competent to furnish. Nature is not a mere juxtaposition of parts, but a complex organic whole; and the different branches of science are so closely allied that, without a general knowledge of all, we cannot have a complete comprehension of any.

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But a general elementary training we deem serviceable only in so far as it is ancillary to the intelligent study of special subjects; and in providing for the former, our scheme of education is only half completed. Provision must also be made for the latter. Along with the pass-course at Oxford, there is another system of study, making quite different demands upon the energies of the student, and called the *class-course*. Our system of minimums likewise needs to be supplemented by a course entailing far greater labor, and crowned with still higher results. In reducing, as here recommended, the amount of work in the required studies, in uniformly postponing doctrine to method, in contemplating scientific truths only in their general bearings, and in extending its instruction over so wide a field, the University will have secured but one of its great educational ends. It will have supplied the instruments for investigation; it must now supply the material. In order to discharge its second great duty of providing each student with the means of thoroughly conducting special studies, the University should introduce an extensive and well-regulated system of electives. For this we have an obvious



analogue in the usage of our ancestral institution in England. We allude, of course, to the *triposes* of the University of Cambridge, so called, not from anything triple or tripartite in their structure, but because of the "*stool* or *tripos* on which the bachelor of the day sat before the proctors during the disputations on Ash-Wednesday." Along with the course of required studies, remodelled according to the principles here laid down, a series of triposes should be instituted. The classic languages, with ancient history and ancient philosophy, would naturally constitute one tripos; a second might be made up of pure and applied mathematics; a third, of chemistry and the organic sciences; a fourth, of psychology, logic, and the history of philosophy; a fifth, of modern history, political economy, and elementary law; while a sixth might be assigned to modern languages and general philology. At the beginning of the Sophomore year,—when, as we shall presently see, matriculation should be granted and the proper University course should commence—the student should be allowed to select one or more of these triposes, in which to pursue his studies until graduation. As in each tripos the degree of proficiency requisite in order to graduate with honor should obviously be placed very high, few students would think it advisable to take up more than one. Thus organized, the system for triposes would, for all practical purposes correspond to the Oxford class-course.

Many students will in every year be found willing to content themselves with the pass-course. They have no desire to do more than the minimum of work needful in order to get through college without disgrace. Or perhaps they are feeble in health, or have been imperfectly

trained in school, and cannot, therefore, expect to do justice to the severe requirements of a tripos. These should be allowed to act their pleasure; the education they will get from the pass-course is vastly better than none; and there are better means than direct compulsion for inducing the student to follow the laborious and profitable path. Either a higher degree should reward the perseverance of the classman, as some have already suggested, or the maximum of credit should, for the pass-man, be reduced by one half or even by two thirds. In any case, all the honors of the University, all its scholarships, prizes, and emoluments, should be strictly reserved for those who have distinguished themselves in a tripos. Besides this, for the classmen, the constraint of compulsory attendance upon recitations and lectures should be materially diminished. Every one possessed of the requisite experience knows that, for the able and diligent student, too frequent recitation is not only a hardship, but a hindrance. The explanations of the professor, adapted as they must be to the comprehension of all his hearers, are often entirely superfluous to any one who has properly gone over the subject beforehand; while listening to the awkward blunders of dull or lazy classmates is not only a waste of time, but an irritation to the nerves. Nor could any class-man be expected to acquit himself satisfactorily upon his final examination, if three hours were to be subtracted from his time for study each day. Four or five recitations every week in the studies of the tripos would be amply sufficient. The class-man should also be exempted from pursuing that portion of the pass-course covered by the subjects embraced in his tripos. Obviously, he who selects Latin and Greek for his



special studies will gain nothing by following the instruction given upon those subjects to the pass-men, though in all other departments he must keep up to the minimum required. As a further means of relieving class-men from the distractions of continual recitation, and in order to provide all students with a wholesome incentive to exertion, a conditional exemption from recitations might be granted in the studies of the pass-course. For example, all persons attaining a certain standard of excellence in the monthly examination might be required to attend only half the stated number of recitations for the month following. The next examination would afford both a test of the faithfulness with which the student has employed the time thus left to his control, and an occasion for withdrawing the privilege in case of its abuse. Some such system as this might be put into operation even in the present state of affairs. Its merits, in creating a powerful yet thoroughly natural motive for promptness and diligence, are perfectly apparent. It goes far toward obviating the defects of the system of compulsory attendance, while it does not ignore the value of that discipline which can only be got from occasional intercourse with tutors and fellow-students in the recitation room.

The advantages of solving problems, construing an ancient author, or rehearsing the results of one's reading in the presence of classmates and subject to professorial criticism, are indeed sufficiently obvious. Skill in acquiring knowledge ought certainly to be accompanied by skill in reproducing it; nor would the student be likely to do credit to himself in the examination, who should fail previously to test his powers of answering questions on the spur of

the moment. But the business of recitation should not be confined to going over in public what has already been gone over in private. The instructor's superior knowledge and more extensive sources of information should be applied to the elucidation of the subject in hand. Questions should be freely asked, and discussion, wherever relevant, should be encouraged. Thus conducted, the recitation would fulfil its appropriate function of making good the short-comings inherent in a system of merely private study, of supplying illustrations which cannot be found in text-books, and of smoothing the difficulties which from time to time beset the student in his progress.

Viewed in this light, the recitation is properly an auxiliary to study, rather than a gauge of the student's attainments. The latter purpose can be adequately subserved only by the examinations, on which the rank assigned to the student should exclusively depend. The marks given on individual recitations are nearly worthless as an index of scholarship. By dint of "cramming," the use of keys, translations and other abominations, a delusive show of knowledge can easily be produced, which may answer the demands of the moment, but which a shrewd examination will inevitably dispel. If recitations were not allowed to influence rank, and were conducted in the conversational manner here recommended, the chief temptations to the employment of these wretched subterfuges would be at once removed. Accuracy of scholarship can never be looked for in a man who refuses to grapple with obstacles himself; and to translations in particular it may be objected that, being rarely executed by competent scholars, their interpretations of difficult passages



are usually quite untrustworthy. Any system of conducting recitation, whose tendency is to banish these treacherous guides from the precincts of the University, is by that circumstance alone recommended at the outset.

The object of the triposes is to encourage minute and thorough scholarship. To this end, the distribution of honors should be determined by the results of a competitive examination held at the close of the college course, in which the requirements should be so great, and the questions so searching, as to render hopeless all attempts at succeeding by surreptitious means. At Oxford, for instance, the final class-papers in mathematics include questions covering the whole subject of pure and mixed mathematics; and there is no reason why our standard of proficiency should not be equally high, since in a purely optional course neither inability nor distaste for the subject can reasonably be

pleaded. From the classical student, besides thorough familiarity with the text and subject-matter of at least ten difficult authors, we should demand a knowledge of ancient history at once extensive and accurate, as well as some skill in treating the higher problems of philology and criticism. And in the other class examinations the requirements should be similar. With such an organization, it would be strange if the University did not each year send forth a considerable number of persons in every way prepared to become finished scholars. With the compulsory system reduced to the lowest practicable minimum, and the elective system carried out with the greatest possible completeness, the chief ends of a liberal education can most effectually be secured; and the most excellent features of the European university will thus be adopted without resigning any single point of superiority possessed by the American college.



# The Third and Fourth Resolutions

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The Saturday sessions of the Second Annual Meeting of the Association (1897) were devoted to the discussion of the third and fourth resolutions: (For the first and second resolutions see The North Central Association Quarterly, pages 386-389.)

## Third Resolution

*Resolved*, That in the opinion of this association, in the secondary schools, and in the colleges as far as the end of the Sophomore year, the foremost object of effort should be the development of the various powers of the pupil rather than the supply of information; that those studies which are best adapted to develop the faculties of the pupils should have predominant place in the several curricula; and that the studies selected for this purpose should receive more prominent and prolonged attention than they do at the present time.

## Fourth Resolution

*Resolved*, That in every secondary school and in college as far as to the end of the Sophomore year, the study of language and the study of mathematics should be predominantly and continuously pursued, that the study of English, including grammar, rhetoric, composition, should continue throughout every course; that two languages besides English should be studied; and that no other studies should be allowed to interfere with the pre-eminence of the studies here designated.

These resolutions were discussed by Principals Harris of Cleveland and

Westcott of Chicago, Presidents Bradley of Illinois College, Fiske of Albion College, and Canfield of Ohio State, and Professors Judson, Chamberlain and Shorey of Chicago, Russell of Colorado, and Superintendent Nightengale of Chicago, who proposed the following substitute for the resolution four:

## Substitute for Resolution Four

*Resolved*, That in both secondary schools and colleges, such courses of study should be provided, as will offer to every student, the best advantages, within reasonable limits, for the highest development of those talents with which he has been endowed, and that to this end studies should be arranged under the following heads, viz.: (1) language; (2) mathematics; (3) natural and physical science; (4) history and literature; (5) civics and economics; and further that while students should, in general, be encouraged to maintain a reasonable balance between these, the courses should be so plastic, as to permit alternative options, with a view to their adaptation to the individual capacities and purposes of students.

Superintendent Nightengale urged that:

All secondary courses of study, all requirements for admission to college, and all courses in college should be eminently elastic, and abound in such substitutions that every pupil may find those studies whose proper pursuit will guarantee to him that intellectual grasp and growth, which the infinite Architect of his latent mental aptitudes intended him to secure.



Professor Chamberlain said in part:

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Our educational methods must follow the progress of the ages. It is idle to train our children to methods which the experience of the ages has condemned. The resolution, by so narrowly restricting the range of work during the six critical years of incipient manhood, not only falls sadly short of developing the various powers of the mind in any full sense, but ignores some of its most important functions. This restricted range of work gives almost no opportunity to continue the normal development of the mind. The child begins as an investigator,—as an original investigator, necessarily, since the world is new to him, and no one can teach him anything until he learns how to interpret what his senses convey to him. No one can communicate with him by language until he finds the key to language. This he must discover by his own processes. It is to him a great discovery. It is a Rosetta stone of transcendent importance. It is only after the clue to language has been found by his own original efforts that communication can begin and imposed instruction take the place in part of his original methods. When we put the child into school under the narrow inherited system of instruction we largely take away from him the natural stimulus to original inquiry. By confining his studies to things artificial we render his modes of thought artificial. By confining his work to things conventional we conventionalize him and he largely loses his power and habit of original inquiry. The subjects to which the resolution would confine the larger part of the student's work in the six critical years of his development are not adapted to develop the power of original inquiry. The work proposed by the resolution is there-

fore deficient in this radically important aspect. To give the student a full and ample opportunity to continue and to strongly develop the normal habit of seeking truth for himself and by his own individual methods and to develop in himself the fundamental powers involved in original inquiry, it is necessary that he be led into other fields than those named in the resolution.

The nation has been roused during the past few months to the imperative necessity of a more intimate knowledge of the things that concern our social, financial and business relations. We have come to realize as never before in the history of the nation that it is obligatory upon us to turn our best intellectual powers upon our social, political and industrial problems, and that it is imperative that the nation be educated into a competency to solve these problems. But there is nothing in the two lines of study given predominant place by the resolution that qualifies us to master these problems. They are problems of evolution. To reach their solution we must enter upon a scientific investigation of the great fields in which these problems lie. For the solution of the problems of society it is necessary to subject society to the processes of rigorous scientific inquiry. To do this successfully it is necessary to train those powers which enable us to observe, to sift and to test facts and to draw safe inductions from them.

We are passing through the greatest intellectual revolution that the world has experienced. The last twenty-five years have witnessed a struggle over a fundamental problem that effects us in every way, involving the question of our origin and of our fundamental nature. The preliminary solution of this problem was wrought out by those who have gone to



nature for their fundamental data and have worked on lines of close induction according to the modes of modern science. This profound problem is being wrought out by modes and by processes almost entirely foreign to those which the resolution in its partiality assigns to a preponderant place. And so in other important instances. The great problems of the day, in which every educated person should share by interest, if not by contribution, are being wrought out by the use of powers and processes of the mind which are almost wholly neglected by the resolution.

It would seem obvious, therefore, that the advocated curriculum is not fitted to prepare us for the great issues that are upon us. The favored subjects have their value beyond any question, but they do not cover the full range of a good citizen's intellectual necessities, nor of his moral responsibilities. It seems to me, therefore, that these two subjects are not enough to form the staple of the high-school course, since it is the function of the high-school course to train men and women for the various issues of life. Its breadth should be as great as the primary necessities of society. It should develop those powers and processes of the mind which are most needed in the ordinary walks of life. To narrow the training of the powers to essentially two leading lines is to take away from the high schools their normal and legitimate functions.

As has been so well set forth by the speaker who preceded me, society today makes wide demands. To meet these there should be culture on a wide range of subjects. The needs of today are not met by uniform training. They are only met by a great variety of training. Some particular training may be better in my

judgment than any other training, but if you and I and everybody else selects this particular training, the inevitable result is over-production in one line and deficiency in others. If you and I endeavor to make every boy and every girl after one pattern we will have a superfluity of that pattern and other desirable patterns will be wanting. The world does not want men of a single type. It wants men to fit every situation, and it is the duty of the educator to provide, so far as possible, the basis for all these variations of culture; for all laudable developments of the powers of the mind. This cannot be done by any bipartite curriculum such as that proposed by the resolution. It can only be accomplished by a wider range of training involving the culture of a larger number of the fundamental powers and processes of the mind.

So I agree heartily with the general proposition of Superintendent Nightingale that our courses should be comprehensive and plastic. They should be adaptive. There flows in and out of our schools continually a stream of prospective men and women of varied talents and adaptabilities, corresponding to the varied needs of society. It is our duty to lead them to make the most of themselves individually and to become individually the most helpful to society. It is the development of the individual character and the fitting of that character for its place in life that constitutes the primary function of education, and unless we reshape our inherited curriculum to the better performance of this function, and by all practicable modifications and amplifications adapt it to the varied and changing needs of a progressive civilization, we fall short of our highest functions as educators.

The discussion was continued by



Professor Shorey from whose address the following are selections:

The fundamental educational issue to which this way of approach has brought us is that of the affirmation or denial of the modern thesis that all studies are essentially equal. Now this proposition, like the axiom that all *men* are born free and equal, I hold to be hopelessly equivocal. It can be properly discussed only by means of careful definitions and distinctions. It starts of course with the rhetorical advantages of its association with "liberty, equality, fraternity," progress, evolution, regard for the individual, rejection of narrow mediævalism, and many other commendable words and phrases. But I am going to assume that while this audience retains enough of the original Adam to enjoy good rhetoric, its opinions are not necessarily determined thereby. I believe that all departments of study are or should be equal before the president and board of trustees of the university, and in the esteem which the public entertains for their trained and highly specialized representatives, just as I believe that all *men* should be free and equal before the law and in the enjoyment of the courtesy and consideration due to our common humanity. I will admit that all studies do, or at least may conceivably, yield equal intellectual discipline to those who with adequate previous preparation pursue them systematically and scientifically to the attainment of a reasoned mastery. I will grant, too, that just as in literature or art, *le chef d'oeuvre vaut le chef d'oeuvre*, and we cannot wisely say that the great symphony is inferior to the great poem or the perfect statue to the perfect picture, so also regarded merely as material of construction in humanity's palace of art and science, considered merely as knowledge

or information, the *matter* of one science is, in its own place, and as an indispensable complement of our total conception of the universe as worthy and as significant as that of another. But even the sonorous eloquence to which we have had the pleasure of listening today fails to convince me that these propositions, taken singly or collectively, amount to a proof of the precise thing which was to be proved by the advocates of the doctrine in question, namely, that all studies which have obtained a lodgment in the graduate schools of our great universities are of equal educational value in the first half of an eight years' course devoted to non-technical and non-professional education.

Another plausible prepossession with which much rhetorical play can be made before popular audiences is the demand for fuller recognition of the idiosyncrasy of the individual student. The intellectual aptitudes of boys are as diverse, we are told, as the color of their hair and eyes or the shapes of their heads. It is a cruel wrong, and a stupid misapplication of faculty to set Tom Tulliver to conning the Latin grammar while all his mechanical cleverness and capacity for affairs are running to waste. It would be easy to quote volumes of indignant eloquence to this effect. But let us keep to the point. We are not talking of life in general (our students *live* outside of the school), nor of education in general, nor of preparation for life in general, nor of boys who ought to receive a good common-school or high-school education and then pass through the business college or technical school to their trade or profession. We are not prescribing for the genius who, without ever crossing the threshold of either college or academy, rises to the control of the railroad systems of a continent or learns to sway listening alder-



manic councils by his eloquence. Nor for the genius of another type, who is imperiously impelled from his earliest years to carve, sing, or paint, and is recalcitrant to all our formal discipline. We are speaking solely of the wisest choice and grouping of studies in a curriculum designed for the limited number of those who can profitably devote eight years to non-professional education. And, speaking with this limitation I totally deny the coincidence of an *incapacity* to learn elementary mathematics and master by scholastic methods the elements of one or two foreign languages with the *ability* for the serious prosecution of other studies. The contrary opinion will always enjoy a superficial popularity. We like to imagine that the depths of our own personalities are truly abysmal, and, like the hypochondriac old ladies of *Middlemarch*, we are pleased by the deference shown by our physicians, whether of the body or of the mind, to the phenomenal peculiarity of our own constitution. There are doubtless dull and lazy boys incapable of concentrated attention and consecutive thought who cannot or will not learn their algebra or geometry, and who are flattered by the illusion of progress which the less definite and precise tests of some other studies permit them to cherish. There are dreamy boys with a pretty taste for poetry, history, and romance who, if encouraged, will rush to cull the flowers of a superficial literary culture, neglecting the laborious cultivation of the roots. There are boys like Martin, the madman in *Tom Brown*, with a fancy for collecting plants and gathering a menagerie about them, who can doubtless derive much pleasure and pick up some information by unsystematic cultivation of the field of the descriptive and classificatory sciences. I

admit, too, that genius for the higher mathematics and the peculiar verbal memory that leads to polyglot facility or great philological attainment are rare and special gifts. But the boy who cannot learn elementary algebra and geometry, and can master the logical methods of the exact sciences, the boy who cannot learn to construe a modicum of Latin and French and *understand and enjoy the author he reads* in the process, but who is endowed with a mysterious precocity for psychology, sociology, political science, and history—that boy is either an educational myth or a maligner who would be very much amused to find us taking him so seriously.

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"But why," my opponents will impatiently ask, "why this perpetual question-begging assumption, that these particular studies will, beyond all others, foster the higher intellectual life of the nation?" Let me again point out that the assumption is not so broad as this. There is no claim of an absolute and metaphysical superiority for these studies. It is merely affirmed that experience shows that they supply the best attainable discipline in the first half of the curriculum which is *ex hypothesi* non-professional and extends over eight years. There is no lack of familiar arguments to support the proposition (thus limited). I can only glance at the more important here. In the case of mathematics I presume the point need be argued only for form's sake. I need hardly enlarge on the disciplinary value of mathematics in fixing a wandering attention and accustoming the mind to following and retaining long chains of exact reasoning. Nor need I labor the point that so much mathematics as is here contemplated is an indispensable propædæutic of any study of the



sciences that goes beyond herborizing and the collecting of butterflies. Nor is any one likely to deny the value, merely as information, of a knowledge of algebra, geometry and the elements of mechanics and astronomy. And the adaptation of mathematics to precise methods of teaching and testing is a truism. The objection that practical life requires only a little ciphering does not lie in the mouths of the representatives of high-school and collegiate education. For we all know that if practical life means accumulating a million, or bossing a city council, then practical life does not require even a high-school education.

The real issue, then, is the question of language. I have already indicated that I should favor a minimum of one foreign language for an education that ends with the high-school. It remains to argue that the conditions of our higher intellectual life make a minimum of two foreign languages an indispensable staple of the earlier years of a liberal education. We cannot demonstrate such a proposition geometrically. But we can lay down a few postulates and exhaust a few alternatives. One foreign language seriously studied is of course absolutely necessary. Without that no man can understand the general logic of language, the structure of our own derivative and highly composite idiom, and, what is perhaps hardly less essential in this age of cosmopolitan literature and frequent translations, the very meaning, capacity and limitations of translation from one idiom to another, and the mutual influences and interactions of related and associated literatures.

The claims of a second language must rest on other than these general disciplinary values. They are not hard to discover. Nothing but imperious necessity can justify the omission of Latin. But if

Latin is elected, the student can hardly dispense with a firm grounding in at least one great modern language by way of introduction to our cosmopolitan and complex modern world of thought, even if we assume that he may safely be left to pick up a working knowledge of others in later years. On the other hand, if we concede to imperious necessity the omission of Latin it must mean extreme specialization in the physical sciences. For specialization in the historical and philosophical sciences without Latin would be an absurdity. But the specialist in the physical sciences surely needs both French and German as tools. And if he is to have anything deserving the name of a liberal education, he must push beyond the command of these languages as tools to the study of German and French literature. On either alternative then we get a minimum of two languages. Such formal reasoning will not go far to persuade those who are not already convinced. But, indeed, I am embarrassed by the obviousness of my main contention, when once misunderstandings and prejudices are cleared away. And in the few minutes that remain I must limit myself to a brief indication of what seems to me the central misconception of those who declaim against the prominence assigned to the scholastic study of language in youth.

It has become a wearisome commonplace of recent psychological and pedagogical literature to urge that the study of words without things impairs the vigor of the mind, that thought depends upon sensation, and that we must lay a firm foundation in perception and observation before we erect the superstructure of reflection. There is a mob of writers in the educational journals where entire stock in trade is the repetition of



these truisms. The Boston school children who had never seen a cow or a pig are made to point many a pedagogical moral and adorn many a psychological tale. Perhaps the flower of this literature is a recently published quaint jumble of second-hand physiological psychology, pedagogy and literary gush of which the main thesis seems to be that the supreme genius of Shakespeare was in large measure due to his familiarity with the wild flowers about Stratford-on-Avon. Now I have not a word to say in disparagement of the kernel of obvious truth contained in all these platitudes. And it may be that in some quarters there is need of this reiteration of the self-evident. But there is another aspect of the mental life which these repetitious denunciators of what they call a verbal and bookish education ignore. The reflective faculties no less than the perceptive may be atrophied and their development stunted by lack of exercise in the plastic years of youth. It is axiomatic that the abstractions of any given subject should be presented only after the corresponding concrete perceptions have been acquired. But it by no means follows that a healthy child of ten is better employed in testing the starch of potatoes with iodine, or in building geometrical block houses than it would be in learning to read and cipher. If thoughts without intuitions are empty, intuitions without thoughts are blind. In three cases out of four the iodine game will deposit in the child's mind a memory image of blue and nothing more. The children of all but the totally disinherited classes derive from the inevitable experience of life a quite sufficient stock of sense impressions with which to begin the discipline of the intelligence. The neglect or undue postponement of that discipline for the sake

of building up an unnatural and artificial sense experience is a dubious educational experiment and not a postulate of sound psychological and scientific method as it has been pompously proclaimed. What constitutes the difference between the young Englishmen who go out from Oxford or the civil service examinations and the barbarians they dominate, often their superiors in quickness of perception and in many attributes of the physical man? What is the difference between a physically vigorous and alert modern laborer and one of the leaders of modern civilization? It does not lie mainly in keenness of sense perception or in the store of sense memories. It lies in the subtle and often distorting elaboration of sensation and sense memories in the mind, in the establishment of a vast network of connecting relations between them.—It is the extent, the delicacy, the precision, the just and exact functioning of this correlating internal mechanism that distinguishes the civilized and effective man. Even in the field of the physical sciences it may be doubted whether the educational shibboleths of the hour are not working harm by this rhetorical exaltation of sense perception above thought. I have been told by thoughtful men of science that it is quite as possible to have too much laboratory work as too little; and that much of the "experimenting" done by American high-school and undergraduate students is essentially of the nature of kindergarten-play. The great discoverers have often been awkward manipulators, and despite the contrast so often thundered in our ears by the official orators of science between the moderns who experiment with things and the ancients who spun the world out of their inner consciousness, it would appear, if my informant has not misled me, that



discoveries are still made as well by "intending the mind" as by staring at a test-tube. The testimony of the leading men of science in the Royal Society is that with advancing mastery their "mind stuff" comes to consist less and less of clumps of sense images and more and more of symbols and fine-spun threads of relations. Now all this is no argument against the early education of the senses, or against furnishing the youthful mind with a good stock of vivid sense images and concrete experiences. If, like the Boston school children, your pupils will not confess to having seen a cow, let them go and look at one on the first opportunity. And if, to quote the report of a noted kindergarten, they have never "observed the softening effect of water on vegetables" get the cook to demonstrate it at her earliest convenience.

But while we are educating the central nervous system in the reception and retention of sense images, let us see to it that we do not let slip the few short years in which it is possible to establish lines of intellectual relations between sense images, and gradually elaborate the raw material of thought into higher more economic and more effective forms of ideas. A man who is incapable of apprehending a nice distinction or grasping a general proposition is surely as unsatisfactory an educational product as a child that has never applied the iodine test to potatoes. And we shall woefully multiply the number of such stunted intelligences if in obedience to the demands of a fanciful psychology we postpone all serious exercise of the higher intellectual powers until the child is supposed to have acquired the sensational elements of all arts and sciences. For the hardening brain that has begun to set and take

its ply opposes quite as much resistance to the opening up of new lines of internal communication as to the reception of fresh impression.

Now I know not what wrongs they suffered in youth, the gentlemen to whom the praise of language and the study of language is as a red rag to a bull. There is no lack of bad teaching in the world. But I know that the scholastic study of languages accompanied by the translation and close interpretation of good literary texts is on the whole the best educational instrument at our disposal for the stimulating and development of those higher mental activities on which I have been dwelling. It is a daily and hourly exercise in mobilizing, synthetizing, refining and elaborating, coloring with moral and aesthetic associations, and correlating in countless ways the raw material of our limited personal experience.

\* \* \* \* \*

Nothing less than the absolute necessity of taking the time for more essential things could justify the omission of this humanistic preparation for specialism in the only years in which it can be successfully assimilated by the mind. There is no such necessity. The opponents of the predominance of language and mathematics in the years under consideration are at present agreed only in combining against that predominance and in pleading each for the introduction of his own hobby. They have no equally definite, difficult and disciplinary subjects to substitute, and if we concede their principle of the equality of all studies, the educational Canaan which they prophesy may or may not be entered by our posterity, but we shall certainly wander more than forty years in the wilderness.

The place now occupied by languages and mathematics is not needed by the



experimental sciences. It is still possible, though languages and mathematics (including physics) predominate in the first six years of the course, to lay a sound foundation in physics and chemistry on which to build up in the later years. The claims of the mental and moral sciences to the place have recently been pressed by very able men. It is hard to take them seriously. If these studies are to be pursued in the light of history and experience and not constituted *a priori* with the aid of trained analogies borrowed from the physical sciences, they demand, as we have said, at least so much of the logic of expression, so much of the analysis of the forms and instruments of thought, so much practice in the great art of interpretation of texts and contexts, so much flexibility of mind resulting from familiarity with various ideas in various dress, so much acquaintance with the best that has been thought and said in the world as would be given by six years of continuous study of language and literature in youth. In fine, this pressure from above, that threatens to disorganize our secondary education, has not come, I believe, from the intelligent representatives of the exact physical sciences or of the old estab-

lished historical sciences. It is exerted, chiefly, in the name of a confused and rhetorical ideal of a scientific and progressive education in which the less exact physical sciences and the younger and as yet imperfectly constituted mental and moral sciences are to hold the leading place. This grouping, which may or may not represent for the pioneers on the frontiers of exploration the method of progress, will be productive of nothing but confusion in secondary education. Its triumph here would mean the survival as the dominant type of western scholarship, of the superficial, rhetorical, boisterously radical, self-styled progressive, precocious, pragmatistical all-knowingness, that even now threatens to make certain classes of our young people traduced of other nations. Let us hope for better things.

After further discussion by Chancellor Chaplain of Missouri, President Baker of Colorado, and President Adams of Wisconsin, the fourth resolution with the proposed substitute was referred to the new executive committee, to consider the advisability of bringing it before the association for discussion at the next annual meeting.



## Report of the Committee on Graduate Degrees

*Given before the Commission on Institutions of Higher Education at the March Meeting*

Two years ago, while Secretary of this Commission, as I reviewed the reports of the colleges on the training of the members of their faculties, I was impressed with the importance of some central supervision of graduate work. Degrees were reported from institutions which in my judgment were wholly unqualified to confer graduate degrees. Further inquiry showed that even the great universities varied widely in their requirements for the same degree. Some of the great universities are so crowded in certain departments with graduate students that the graduate work could well be questioned.

With these matters before me I recommended that the Commission appoint a committee to collect information and study the problem. I was appointed as a committee of one to collect data on the graduate degrees conferred by the institutions accredited by the North Central Association. On pages 421-427 of the March Quarterly you will find the report.

I believe that it is possible for this Association to go somewhat farther relative to graduate work. We are insisting that the colleges of the Association appoint to their staffs only such professors and instructors as have had graduate work in "recognized graduate schools." It is highly undesirable that well-meaning teachers should spend their time and money in trying to meet this requirement at graduate schools that are not recognized. In my judgment the Association of American Universities should be the recognized authority in this field, but so far as I can learn they accept no responsibility as an accrediting body.

I therefore move that this committee be continued another year and that Dr. Wm. McPherson, Dean of the Graduate School of Ohio State University, and Mr. Walter Payne, Recorder of the University of Chicago, be added to the Committee; that this committee be instructed to study this matter of graduate study and degrees further and report at the meeting in 1928.

—R. M. Hughes.



# Report of the Committee on Athletics to the Commission on Higher Education of the North Central Association

*Given before the Commission on Institutions of Higher Education at the March Meeting*

## I.

This committee is of the opinion that institutions generally in this Association are doing as well as can reasonably be expected in dealing with the existing athletic situation which is the basis of this report. Real progress will be achieved only by changing this situation. Such a change in the right direction may be adoption of the health interests of students as the point from which to view the athletic program and the complete incorporation of that program in the general educational program of the college. At present the facilities available for an approach to the inter-collegiate athletic program from this point of view are inadequate and, therefore, require elaboration of personnel and physical equipment in order to provide health service for each student and opportunity or requirement of participation in sports by all students. Herein is the opportunity for real progress.

## II.

The committee is authorized to co-operate with any appropriate agency in doing its work. Therefore, the committee is co-operating with Dr. H. J. Savage of the Carnegie Foundation and especially is waiting for the findings of Dr. Savage in the hope that some valuable and suggestive facts and ideals will be thus made available for use by the North

Central Association in determining especially the scholarship standing of athletes.

## III.

The application of detailed athletic standards is a difficult task for the Commission to assume. All of our purposes may possibly be served by declaring that standards for athletics and administration of such standards shall be agreeable to the "tone" which is now required for accrediting by this Association.

## IV.

The committee further suggests that our ends may best be served by drawing up a list of accredited Athletic Conferences and declaration of our purpose to accept membership in good standing in any accredited athletic conference as fulfillment of all the Association's athletic requirements.

## V.

In case the Association does not care to adopt either of the two suggestions (III and IV) above, the Committee makes the following statement of standards which are largely a description of common practice.

1. Final decision in all matters of athletic policy shall rest with the faculty.

2. Academic requirements and assignment of scholarships, student aid funds and remunerative employment of



students shall be immediately and finally controlled by the faculty acting directly or through its regularly constituted officers or committees without discrimination in favor of or against athletes.

3. Payments of money to athletes by institutions for service as athletes, "hiring" athletes or the equivalent of such procedure, and maintenance of free training tables by institutions are not permissible.

4. Coaches should serve full time and should rank as faculty members.

5. "Scouting" by which is meant the personal solicitation of students by coaches and the offering by coaches to prospective athletes of special inducements to attend college are not permissible.

6. Faculties should control and

keep within reasonable limits the amount of time devoted to athletics. Coaches should not require more than two hours a day for practice. The members of intercollegiate games should be kept within reasonable limits. Long trips for such games should be discouraged.

7. Salaries of coaches should be commensurate with other salaries for officers of equal rank and should be paid by the institution.

8. All athletic funds should be handled by the institution's business office and regularly audited. All athletic expenditures should be included in the institution's budget.

H. M. Gage,

J. S. Nollen,

L. W. Smith.

### The Curriculum Reprints

*The Commission on Unit Courses and Curricula has provided a goodly supply of reprints for all the curriculum materials, which appeared in the March issue of the Quarterly. It is eager that every teacher in every secondary school in the North Central Association shall have these reprints and shall report on their values. Will not, therefore, all schools which have not ordered this material, please do so AT ONCE. Direct your order to C. O. Davis, North Central Association Quarterly, 420 University High School Building, Ann Arbor, Michigan.*

*The following reprints are available: (1) English, (2) French, (3) Latin, (4) General Science and Biology, (5) Physics and Chemistry, (6) Home Economics, and (7) Physical Education. The price is \$.10 per reprint or \$.50 for the bound copy containing all reprints.*



## INDEX OF

PROCEEDINGS OF NORTH CENTRAL ASSOCIATION OF COLLEGES  
AND SECONDARY SCHOOLS, 1895-1925

Prepared under direction of J. B. Edmonson, University of Michigan

This index has been prepared in order to make the past records of the Association of greater value to students of its history. The index will also serve to inform readers of the Quarterly of the wide range of problems that have been presented to the Association and to aid members in recalling the names of the leaders in education who have contributed to the programs during the period, 1895-1925.

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